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NOTES

California's Nuclear Power Regulations: Federal Preemption?

*By Dan M. Berkovitz**

Introduction

In 1976, California utilities envisioned the construction of thirty-one large new nuclear power plants by 1994.¹ Since that time, however, only two plants have been proposed, and construction plans for both facilities have been scrapped.² Lower than projected growth in energy demand and the increased concern for safety after the incident at the Three-Mile Island nuclear plant are partially responsible for this moratorium.³ But perhaps most importantly, California's nuclear power regulations pose a practically insurmountable legal obstacle.⁴

These regulations were passed in two stages. The Warren-Alquist Act, enacted in 1974, contains licensing provisions applicable to all new thermal power plants, including nuclear plants.⁵ In 1976, three amendments to the Act were passed to discourage the passage of Proposition 15, a voter initiative that would have eliminated nuclear power in California for the foreseeable future.⁶ The amendments contain some fea-

* A.B., 1978, Princeton University; member, third year class. The author would like to thank Kathryn Burkett Dickson for her invaluable help. All opinions and errors, however, are the author's.

1. *The Nuclear Initiative: Hearings on Prop. 15 Before the California State Assembly Comm. on Resources, Land Use, and Energy* (1975) (Staff Background Papers §§ 1-2) [hereinafter cited as *Assembly Comm.*: Staff Background Papers].

2. See notes 188 & 246 and accompanying text *infra*.

3. Power demand has fallen off from a growth rate of about 7% a year in the early 1970's to about 3% in 1981. *TIME*, Oct. 26, 1981, at 19.

4. CAL. PUB. RES. CODE §§ 25500-25542 (West 1977 & Supp. 1981).

5. Warren-Alquist State Energy Resources Conservation and Development Act, CAL. PUB. RES. CODE §§ 25000-25968 (West 1977 & Supp. 1981). Sections 25500-25542 contain the thermal power plant siting regulations. See notes 85-118 and accompanying text *infra*.

6. Proposition 15, § 1 (proposed CAL. GOV'T CODE § 67503(b)(2)), reprinted in CALIFORNIA ASSEMBLY COMM. ON RESOURCES, LAND USE, AND ENERGY, REASSESSMENT OF NUCLEAR ENERGY IN CALIFORNIA: A POLICY ANALYSIS OF PROPOSITION 15 AND ITS ALTERNATIVES 154 (1976). Proposition 15 failed, and in its place were enacted CAL. PUB. RES. CODE §§ 25524.1-3 (West 1977 & Supp. 1981). See note 175 and accompanying text *infra*.

tures of Proposition 15, yet allow the continued operation of existing nuclear power plants. The most controversial of these amendments, California Public Resources Code section 25524.2, conditions the certification of new nuclear power plants upon the existence of a federally approved waste disposal technology for high level nuclear wastes. Since this technology does not presently exist and is not expected to exist until the mid-1990's,⁷ section 25524.2 effectively bans the certification of new nuclear power plants in California.

Unhappy with the foreclosure of the nuclear option, two California utilities, Pacific Gas & Electric Co. (PG&E) and Southern California Edison (SCE), have challenged the constitutionality of certain provisions of the Warren-Alquist Act and the 1976 amendments.⁸ They have argued that California statutes regulating nuclear power are preempted by the federal nuclear regulatory scheme created under the Atomic Energy Act of 1954. This position prevailed in a federal district court, where California's statutes were held unconstitutional;⁹ however, the United States Court of Appeals for the Ninth Circuit reversed that decision. In *Pacific Legal Foundation v. State Energy Resources Conser-*

7. REPORT TO THE PRESIDENT BY THE INTERAGENCY REVIEW GROUP ON NUCLEAR WASTE MANAGEMENT 35 (1979) [hereinafter cited as IRG REPORT].

8. *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 489 F. Supp. 699 (E.D. Cal. 1980), *rev'd sub nom. Pacific Legal Found. v. State Energy Resources Conservation & Dev. Comm'n*, 659 F.2d 903 (9th Cir. 1981), *cert. granted*, 50 U.S.L.W. 3994 (U.S. June 22, 1982) (No. 81-1945). The provisions that Pacific Gas & Electric Co. (PG&E) challenged are CAL. PUB. RES. CODE §§ 25500, 25502, 25503, 25504, 25511, 25512, 25514, 25516, 25517, 25519, 25520, 25523, 25524.1-.3, 25528, 25532. 489 F. Supp. at 703.

After this note had gone to press, the United States Supreme Court granted PG&E's petition for a writ of certiorari. The Court limited the questions presented, however, to the following: (1) Are petitioner's challenges to § 25524.1(b) and § 25524.2 ripe for judicial review?; and (2) Are §§ 25524.1(b) and 25524.2 preempted by the Atomic Energy Act of 1954? 50 U.S.L.W. 3994.

In another action, the Pacific Legal Foundation, a public interest law foundation, brought an independent suit on behalf of a number of other plaintiffs who also sought to challenge California's nuclear power regulations. *Pacific Legal Found. v. State Energy Resources Conservation & Dev. Comm'n*, 472 F. Supp. 191 (S.D. Cal. 1979), *rev'd*, 659 F.2d 903 (9th Cir. 1981).

Pacific Legal Foundation was consolidated with *Pacific Gas & Elec. Co.* on appeal in the Ninth Circuit, but the Ninth Circuit held that the district court erred in giving summary judgment to the *Pacific Legal Foundation* plaintiffs on the question of standing and therefore reversed and remanded that case back to the district court. Although the Supreme Court has agreed to review part of the Ninth Circuit's *Pacific Gas & Elec. Co.* decision, it declined to disturb that court's disposition of the *Pacific Legal Foundation* case. Hence, this note will focus on the PG&E case in the Ninth Circuit, although it will be referred to by its official name in that court, *Pacific Legal Foundation v. State Energy Resources Conservation and Development Commission*.

9. *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 489 F. Supp. 699 (E.D. Cal. 1980).

vation & Development Commission,¹⁰ the appellate court held that only two of the statutes were ripe for review: California Public Resources Code sections 25503 and 25524.2. The former requires a utility proposing to build a new thermal power plant to submit three possible sites for the plant. The latter conditions plant certification on the existence of a method for the disposal of high level nuclear waste. The court held that states may regulate nuclear power under the Atomic Energy Act of 1954 for any purpose except protection from radiation hazards associated with the production of nuclear power. The court found that California's three-site requirement was environmentally motivated and therefore held that section 25503 was not preempted. More significant, however, was its decision to uphold section 25524.2. The court found that section's central purpose to be economically motivated. It observed that the waste disposal requirement was necessary to prevent the fuel cycle from "clogging" by not having any place to put the spent fuel produced in the core of the reactor, thereby causing premature closing of the plant.

Although the court's reasoning is substantially sound, its conclusion that the waste disposal provision is economically motivated is questionable. The court failed to critically examine the statute's actual operation; instead it accepted statements of legislative intent at face value. This note examines the court's holding and concludes that section 25524.2 is actually a safety provision and therefore should have been held to be preempted.

The decision, nevertheless, is significant in that it provides precedent for other states that attempt to impose *de jure* moratoria on nuclear power plant construction by passing legislation similar to that of California. Because the Ninth Circuit's analysis of these laws is subject to strong criticism, states wishing to impose moratoria must be cautious in adopting regulatory provisions similar to those contested in *Pacific Legal Foundation*.

This note first briefly reviews the doctrine of preemption. It then discusses the federal concern, expressed through the Atomic Energy Act of 1954, for regulation of nuclear power plants and juxtaposes this federal regulatory scheme against that of California. In order to understand the motives behind the California statutes, this note explains basic aspects of the production of nuclear power. Finally, the Ninth Circuit's opinion in *Pacific Legal Foundation* is critically examined, particularly its use of the ripeness and preemption doctrines in analyzing the constitutionality of California's statutory scheme.

10. 659 F.2d 903 (9th Cir. 1981), *cert. denied*, 50 U.S.L.W. 3997 (U.S. June 22, 1982) (No. 81-1944).

I. Preemption

The constitutional challenge to California's regulation of nuclear power rests on the supremacy clause.¹¹ Under certain circumstances, the supremacy clause requires state law to yield to federal law. Over the years, the Supreme Court has articulated various standards to determine whether or not state law is preempted. In order to determine whether or not California's regulation of nuclear power is constitutional, it is therefore necessary to examine these standards, including the Court's most recent pronouncements.

The doctrine of preemption was first enunciated by Chief Justice Marshall in *Gibbons v. Ogden*,¹² where the Court ruled that valid exercises of state power must yield if the state law conflicts with acts of Congress.¹³ The early preemption cases, such as *Gibbons*, arose from state interference with interstate commerce. Since 1941, however, state laws have been preempted in numerous other areas.¹⁴ Despite this expansion in fields subject to federal preemption, the Supreme Court more recently has interpreted the doctrine to favor the states.¹⁵

A. Express Preemption

Preemption is easily recognized where Congress explicitly sets forth in the statute what the states may or may not do. For example, in *Ray v. Atlantic Richfield Co.*,¹⁶ the Supreme Court held that the portion of Washington State's Tanker Law that required enrolled tankers to have a pilot licensed by the state while navigating Puget Sound was

11. "This Constitution, and the Laws of the United States which shall be made in pursuance thereof . . . shall be the supreme Law of the Land; . . . any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." U.S. CONST. art. VI, § 2.

12. 22 U.S. (9 Wheat.) 1 (1824).

13. *Id.* at 210. Earlier cases, *e.g.*, *McCulloch v. Maryland*, 17 U.S. (4 Wheat.) 316 (1819), had ruled that states had no authority at all in certain areas expressly regulated by the federal government.

14. *See, e.g.*, *Northern States Power Co. v. Minnesota*, 447 F.2d 1143 (8th Cir. 1971), *aff'd mem.*, 405 U.S. 1035 (1972) (construction and operation of nuclear power plants); *Perez v. Campbell*, 402 U.S. 637 (1971) (bankruptcy law); *Nash v. Florida Indus. Comm'n*, 389 U.S. 235 (1967) (labor law); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225 (1964) (patent law); *Free v. Bland*, 369 U.S. 663 (1962) (right of survivorship in United States bonds); *Pennsylvania v. Nelson*, 350 U.S. 497 (1956) (sedition laws); *Hines v. Davidowitz*, 312 U.S. 52 (1941) (regulation of aliens).

15. The Court will not find preemption "in the absence of pervasive reasons—either that the nature of the regulated subject matter permits no other conclusion, or that the Congress has unmistakably so ordained." *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142 (1963).

For a discussion of the trend of the Burger Court to favor the states, see Note, *The Preemption Doctrine: Shifting Perspectives on Federalism and the Burger Court*, 75 COLUM. L. REV. 623 (1975). *See also* Catz & Lenard, *The Demise of the Implied Federal Preemption Doctrine*, 4 HASTINGS CONST. L.Q. 295 (1977).

16. 435 U.S. 151 (1978).

expressly preempted by federal regulations stating that "no State or municipal government shall impose upon pilots of steam vessels any obligation to procure a State or other license in addition to that issued by the United States" ¹⁷ In such cases, the only issue is whether or not "the legislative measure adopted is relevant or appropriate to the constitutional power which Congress exercises." ¹⁸

B. Implied Preemption

Often Congress neither foresees nor contemplates concurrent state action when it regulates an area. Courts therefore must determine whether or not Congress implicitly intended the regulations to be exclusive. Implied preemption may occur when there is a conflict between state and federal laws or when the federal law occupies the field in which the state law regulates.

1. Conflict

Implied preemption of a state statute occurs when state and federal statutes are in actual conflict; that is, when compliance with both is a "physical impossibility," ¹⁹ so that to uphold the state law would defeat the purpose of the federal law. ²⁰ Both the purpose and merit of a state statute are irrelevant when the law is in actual conflict with a federal statute. ²¹

Although state and federal laws may not be in actual conflict, the Court has found implied preemption when the state law is merely an "obstacle to the accomplishment and execution of the full purposes and objectives of Congress." ²² This occurs, for example, when the state "discourage[s] conduct that federal action 'seeks to encourage'" ²³ or when the state imposes requirements that are more stringent than or are in addition to those which Congress has adopted. ²⁴

17. *Id.* at 159 (quoting 46 U.S.C. § 215 (1976)).

18. *Railway Employee's Dep't v. Hanson*, 351 U.S. 225, 234 (1956).

19. *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-43 (1963).

20. "If the purpose of the [federal] act cannot otherwise be accomplished—if its operation within its chosen field else must be frustrated and its provisions be refused their natural effect—the state law must yield to the regulation of Congress," *Savage v. Jones*, 225 U.S. 501, 533 (1912).

21. "The relative importance to the State of its own law is not material when there is a conflict with a valid federal law." *Free v. Bland*, 369 U.S. 663, 666 (1962). See also *Franklin Nat'l Bank v. New York*, 347 U.S. 373 (1954). Purpose is relevant, however, in other preemption situations. See notes 38-44 and accompanying text *infra*.

22. *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).

23. L. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 378 (1978).

24. For example, in *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978), the Court also examined the sections of Washington's Tanker Law that required enrolled and registered oil tankers from 40,000 to 125,000 dwt. either to have certain safety features or to be escorted into Puget Sound by tugs. The Court found that part of the congressional purpose in enact-

The use of implied preemption analysis has led to an expansion of the preemption doctrine's application to many areas of governmental regulation.²⁵ Moreover, until the recent past, the Court found preemption of a state law when conflict with federal law was a mere possibility.²⁶ Now, however, the Court demands at least a substantial possibility of conflict.²⁷

2. *Occupation of the Field*

When Congress mandates that its regulations in an area shall be exclusive, it preempts state law in that area by "occupation of the field." Express preemption is a clear form of occupation of the field. Whether or not a statute impliedly occupies the field is a more difficult question.

Courts have found preemption through the doctrine of implied occupation of the field by examining the legislative history of the federal statute,²⁸ by considering the pervasiveness of the federal scheme,²⁹ by considering whether or not the nature of the subject matter demands national uniformity,³⁰ and by determining whether or not the state laws have the same purposes and objectives as those of the federal scheme.³¹ These factors were first identified in 1947 in *Rice v. Santa Fe Elevator Corp.*³² and have been cited often by the Court since.³³

C. Current Trends

The current trend in the Supreme Court is to uphold state statutes whenever possible. The Court accomplishes this by trying to "reconcile

ing the Ports and Waterways Safety Act of 1972 was to set uniform national standards for the construction and design of tankers. *Id.* at 163. The Court held that while the tankers could have complied with both federal and state laws, the state's more stringent standards interfered with the congressional goal of national uniformity. Thus, the federal law preempted the Washington law. *Id.* at 165, 168.

25. See note 14 and accompanying text *supra*. This expansion has been halted by the Burger Court. See notes 34-46 and accompanying text *infra*.

26. See, e.g., *San Diego Bldg. Trades Council v. Garmon*, 359 U.S. 236, 246 (1959) ("danger of conflict" as basis for preemption). But see *Savage v. Jones*, 225 U.S. 501, 533 (1912) (operation of federal law "must be frustrated" as basis for preemption).

27. See notes 35-44 *infra*.

28. See, e.g., *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 153 (1963).

29. See, e.g., *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624 (1973); *Napier v. Atlantic Coast Line R.R. Co.*, 272 U.S. 605 (1926).

30. See, e.g., *Bethlehem Steel Co. v. New York State Labor Relations Bd.*, 330 U.S. 767 (1947); *Hines v. Davidowitz*, 312 U.S. 52 (1941).

31. See, e.g., *Charleston & W.C. Ry. Co. v. Varnville Furniture Co.*, 237 U.S. 597, 604 (1915) (when Congress has regulated a field, "coincidence [of the subject matter of state and federal regulations] is as ineffective as opposition").

32. 331 U.S. 218, 230 (1947).

33. Recently, however, the Court has disfavored the doctrine of implied preemption. See, e.g., *Department of Social Servs. v. Dublino*, 413 U.S. 405 (1973).

'the operation of both statutory schemes rather than holding one completely ousted,'³⁴ by requiring actual, rather than possible, conflict,³⁵ and by requiring that federal statutes express a direct intent to exclude state regulation.³⁶ Just as the expansion of the grounds for preemption led to the expansion of the fields of preemption, this narrowing of the bases for preemption has resulted in finding it in fewer contexts.³⁷

In attempting to reconcile the operation of state and federal statutory schemes, the Court has permitted state law to tread upon areas of exclusive federal control, provided that the purpose for which the state enacted its law is not preempted and that the state does not exclude federally licensed activity.³⁸

The United States Supreme Court decision in *Perez v. Campbell*³⁹ has often been cited to support the contrary position: that purpose is irrelevant in all cases of conflict between two laws. *Perez* involved an Arizona law that required uninsured motorists who had not satisfied

34. *Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Ware*, 414 U.S. 117, 127 (1973) (quoting *Silver v. New York Stock Exch.*, 373 U.S. 341, 357 (1963)).

35. *Goldstein v. California*, 412 U.S. 546, 554 (1973).

36. *Department of Social Servs. v. Dublino*, 413 U.S. 405, 413 (1973).

37. Compare the following cases, involving interstate commerce, in which state laws were preempted, *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978) (state regulation of federally licensed oil tankers); *Douglas v. Seacoast Prod., Inc.*, 431 U.S. 265 (1977) (Virginia statute that prohibited certain federally licensed fishing vessels from fishing in Virginia's coastal waters); *Jones v. Rath Packing Co.*, 430 U.S. 519 (1977) (California law that imposed food labeling requirements different from those of federal law); and *City of Burbank v. Lockhead Air Terminal, Inc.*, 411 U.S. 624 (1973) (Burbank city ordinance that put an 11 p.m. to 7 a.m. curfew on jet flights from the Burbank airport); with cases not involving interstate commerce, in which state laws were not preempted, e.g., *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257 (1979) (state regulation of intellectual property); *De Canas v. Bica*, 424 U.S. 351 (1976) (California prohibition on employment of illegal aliens when such employment would have an adverse impact on lawful resident workers); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974) (Ohio's trade secret law protected information that federal patent laws did not protect); *Merrill Lynch, Pierce, Fenner & Smith Inc. v. Ware*, 414 U.S. 117 (1973) (wage relief provisions of California's labor code conflicted with New York Stock Exchange arbitration rules promulgated pursuant to the Securities Exchange Act); *Goldstein v. California*, 412 U.S. 546 (1973) (California's tape and record piracy law protected recordings that federal copyright laws did not protect); and *Department of Social Servs. v. Dublino*, 413 U.S. 405 (1973) (New York's work rules imposed more stringent eligibility requirements on welfare recipients than did the federal rules). See also Note, *supra* note 15.

38. See, e.g., *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974) (Court reconciled asserted conflict of federal patent laws with state trade secret laws by examining their operation and objectives and concluding that state regulatory scheme was just another incentive to encourage invention and did not threaten the operation of federal law); *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440 (1960) (Court held municipal ordinance requiring smoke abatement devices on ships not preempted by federal licensing which did not require them, reasoning that federal regulations were necessary to protect vessel safety while purpose of municipal ordinance was to protect local population; the provisions were therefore not in conflict because of different objectives).

39. 402 U.S. 637 (1971).

judgments against them or had failed to pay settlements after accidents to prove their financial responsibility before the state would license them to drive again. The Arizona law, contrary to the Federal Bankruptcy Act, specified that this obligation would not be discharged in bankruptcy. In earlier cases involving similar statutes in other states, the Court had held that since the purpose of such laws was to deter irresponsible driving rather than to aid in the collection of debts, they would not be preempted.⁴⁰ Notwithstanding such precedent, the Court in *Perez* rejected purpose as a guide⁴¹ and preempted the conflicting state law.⁴²

Perez, however, is really a case of actual conflict: Compliance with both statutes would be impossible. *Perez* holds merely that the purpose of a state statute is irrelevant when that statute is in actual conflict with a federal statute.⁴³ Thus, the Court will find preemption of state statutes that actually conflict with federal statutes but will look to purpose when there is only a possibility of conflict. If there is only a possibility of conflict, the state statute will be upheld as long as it was not enacted for a preempted purpose (i.e., expressly preempted).⁴⁴

40. *Kesler v. Department of Pub. Safety*, 369 U.S. 153 (1962); *Reitz v. Mealey*, 314 U.S. 33 (1941).

41. 402 U.S. at 651-52. The holding of purpose as irrelevant, however, was confined to an overruling of *Kessler v. Department of Pub. Safety*, 369 U.S. 153 (1962), and *Reitz v. Mealey*, 314 U.S. 33 (1941). The Court found it could "no longer adhere to the aberrational doctrine of *Kesler* and *Reitz* that state law may frustrate the operation of federal law as long as the state legislature in passing its law had some purpose in mind other than one of frustration." *Perez*, 402 U.S. at 651-52. The Court went on to suggest ways in which a devious state legislature could take advantage of a ruling to the contrary, commenting that "[the *Kesler-Reitz*] doctrine would enable state legislatures to nullify nearly all unwanted federal legislation by simply publishing a legislative committee report articulating some state interest or policy—other than frustration of the federal objective—that would be tangentially furthered by the proposed state law." *Id.* at 652.

Indeed, the district court in *Pacific Legal Found. v. State Energy Resources Conservation & Dev. Comm'n*, 472 F. Supp. 191, 198 (S.D. Cal. 1979), inferred that this type of legislative tactic was used by the California legislature in an attempt to save its nuclear power laws from a constitutional challenge.

Actually, the preoccupation with stated purpose is questionable, for "[i]n determining whether a state statute effects its articulated purpose a court examines the practical effects of the legislation rather than any statement of purpose contained in the law itself or its legislative history." *Great W. United Corp. v. Kidwell*, 439 F. Supp. 420, 438 (1977) (citing *Foster-Foundation Packing Co. v. Haydel*, 278 U.S. 1, 10 (1928)).

42. 402 U.S. at 656.

43. Despite the overly broad rejection of purpose in *Perez*, the *Huron* holding, see note 38 and accompanying text *supra*, resurfaced in *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978). With regard to Washington's imposition of safety design requirements on federally licensed ships, the Court stated, "The mere fact that a vessel has been inspected and found to comply with the Secretary's vessel safety regulations does not prevent a State or city from enforcing local laws having other purposes." *Id.* at 164.

44. The abandonment of the "possibility" or "danger" of conflict as a basis for preemption was forcefully stated in *Goldstein v. California*, 412 U.S. 546 (1973). "We must also be

Furthermore, preempted areas must be clearly identified by Congress.⁴⁵ The Court is reluctant to infer preemption simply because the subject matter itself suggests that national uniformity is desirable.⁴⁶ It is beyond the scope of this note, however, to argue the merits or demerits of the current preemption doctrine. Rather, this note will accept the current doctrine and will examine the federal and California nuclear power regulations in that light.

II. Regulation of Nuclear Power

We now turn to a discussion of the federal and state statutory schemes at issue in *Pacific Legal Foundation* in order to understand the claims of preemption raised by PG&E.

A. Federal Regulation

Federal regulation of nuclear power began with the Atomic Energy Act of 1946.⁴⁷ Although Congress was interested in the economic aspects of the new technology, the paramount objectives of the Act were military.⁴⁸ The Act established a governmental monopoly over the development and use of atomic energy⁴⁹ as well as exclusive control over all nuclear materials.⁵⁰ It also created the Atomic Energy Com-

careful to distinguish those situations in which the concurrent exercise of a power by the Federal Government and the States or by the States alone *may possibly* lead to conflicts and those situations where conflicts *will necessarily* arise. 'It is not . . . a mere possibility of inconvenience in the exercise of powers, but an immediate constitutional repugnancy that can by implication alienate and extinguish a pre-existing right of [state] sovereignty.' " *Id.* at 554-55 (quoting THE FEDERALIST No. 32, at 243 (A. Hamilton) (B. Wright ed. 1961)) (emphasis in original).

45. In 1965, while stating the purpose of a clarifying amendment to the Atomic Energy Act of 1954, Congress recognized that "it is scarcely reasonable for Congress simply to leave to the courts the resolution of a problem involving solely the determination of the intention of Congress. It is a responsibility of Congress to assist the courts by spelling out that intention." H.R. REP. NO. 567, 89th Cong., 1st Sess. 9 (1965), *reprinted in* 1965 U.S. CODE CONG. & AD. NEWS 2775, 2780. See note 61 and accompanying text *infra*.

46. In *Department of Social Servs. v. Dublino*, 413 U.S. 405 (1973), the Court observed, "If Congress is authorized to act in a field, it should manifest its intention clearly. It will not be presumed that a federal statute was intended to supersede the exercise of power of the state unless there is a clear manifestation of intention to do so. The exercise of federal power is not lightly to be presumed." *Id.* at 413 (quoting *Schwartz v. Texas*, 344 U.S. 199, 202-03 (1952)).

47. Ch. 724, 60 Stat. 755 (1946). For more historical background, see C. ALLARDICE & E. TRAPNELL, THE ATOMIC ENERGY COMMISSION (1974).

48. Atomic Energy Act of 1946, § 1(a), 60 Stat. 755-56 (1946).

49. Atomic Energy Act of 1946, § 1(b)(4), 60 Stat. 756 (1946). Because of the weapons aspect, Congress felt "an absolute Government monopoly . . . is indispensable." S. REP. NO. 1211, 79th Cong., 2d Sess. 14, *reprinted in* 1946 U.S. CODE CONG. & AD. NEWS 1327, 1330. Section 10(b)(4) provided for the possibility of the death penalty for anyone disclosing restricted data with intent to injure the United States, 60 Stat. 767 (1946).

50. Atomic Energy Act of 1946, § 5(a)(2), (b)(2), 60 Stat. 760-61 (1946).

mission (AEC) to promote and regulate the use of atomic energy.⁵¹

The Atomic Energy Act of 1954⁵² sought to accommodate the changes in the atomic energy field that had occurred since 1946. Congress realized that it had to relax governmental control in order to encourage private development of atomic power. Private development of atomic power was no longer considered a threat to national security.⁵³

The 1954 Act ended the governmental monopoly on atomic energy resources. It allowed private industry, under license from the AEC, to use and control various nuclear materials.⁵⁴ It also allowed private industries licensed by the AEC to construct and operate production and utilization facilities, thereby paving the way for commercial power reactors.⁵⁵ Although the Act recognized the unique hazards created by atomic energy, safety was not an important issue.⁵⁶ As in the 1946 Act,

51. Atomic Energy Act of 1946, § 2, 60 Stat. 756-58 (1946). Congress later realized that the AEC's dual functions conflicted, and thus separated them in the Energy Reorganization Act of 1974, 42 U.S.C. §§ 5801-5891 (1976 & Supp. III 1979). The 1974 Act's purpose was to "develop, and increase the efficiency and reliability of use of, all energy sources to meet the needs of present and future generations." 42 U.S.C. § 5801(a) (1976). No preference was given to nuclear power. The 1974 Act abolished the AEC, 42 U.S.C. 5814(a) (1976), gave the newly established Energy Research and Development Administration (ERDA) the AEC's promotional functions, 42 U.S.C. 5814(c) (1976), and created the Nuclear Regulatory Commission (NRC) to take over its licensing and regulatory authority, 42 U.S.C. § 5842 (1976). In 1977, the Department of Energy Organization Act abolished ERDA and transferred its functions to the new Department of Energy (DOE). 42 U.S.C. §§ 7131, 7151 (Supp. III 1979).

52. Atomic Energy Act of 1954, ch. 1073, 68 Stat. 919 (codified as amended at 42 U.S.C. §§ 2011-2296 (1976 & Supp. III 1979)).

53. S. REP. NO. 1699, 83d Cong., 2d Sess. 2-4, *reprinted in* 1954 U.S. CODE CONG. & AD. NEWS 3456, 3458-59. *See generally* E. ROLPH, NUCLEAR POWER AND THE PUBLIC SAFETY (1979).

54. Atomic Energy Act of 1954, ch. 1073, §§ 11(e), 11(s), 11(t), 57, 62, 81, 68 Stat. 923, 924, 932, 935 (codified as amended at 42 U.S.C. §§ 2014(e), 2014(z), 2014(aa), 2071, 2092, 2111 (1976 & Supp. III 1979)). The three categories of AEC regulated nuclear materials are special nuclear, source, and byproduct. Special nuclear means plutonium and uranium enriched in the isotope 233 or 235. These materials are used in nuclear reactors. 42 U.S.C. §§ 2014(aa), 2071 (1976). Source material refers to uranium and thorium, the raw materials which yield the special nuclear materials. 42 U.S.C. §§ 2014(z), 2091 (1976). Byproduct materials are "any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material" and the tailings produced by the processing of ore to obtain source material. 42 U.S.C. § 2014(e) (1976 & Supp. III 1979).

55. Atomic Energy Act of 1954, ch. 1073, § 101, 68 Stat. 936 (codified as amended at 42 U.S.C. 2131 (1976 & Supp. III 1979)). A utilization facility is a facility that utilizes special nuclear materials. Nuclear power plants are utilization facilities. 42 U.S.C. § 2014(cc) (1976). A production facility refers to equipment that is capable of producing significant quantities of special nuclear materials. 42 U.S.C. §§ 2014(v), 2061 (1976).

56. For example, AEC licensees had to take measures to protect the health and safety of the public. 42 U.S.C. § 2133(b) (1976). However, "[n]o questions regarding the possible safety hazards of nuclear technology were ever explored in the hearings and there were no

the primary goals were defense oriented.⁵⁷

Congress intended merely to control the nuclear aspect of nuclear power.⁵⁸ The amendments to the Act left traditional state functions undisturbed. Section 271, one of the amendments, stated, "Nothing in this chapter shall be construed to affect the authority or regulations of any Federal, State, or local agency with respect to the generation, sale, or transmission of electric power."⁵⁹ Senator Hubert Humphrey emphasized that section 271 was a "positive negation of any intent by [the Atomic Energy Act of 1954] to interfere with the existing laws and the existing authorities, State and Federal, that have to do with electricity."⁶⁰ Ten years later, Congress again made clear that section 271 does not confer upon the states any new authority over nuclear facilities but merely delineates the AEC's exclusive jurisdiction.⁶¹

discussions of what might constitute an 'acceptable' level of risk." E. ROLPH, *supra* note 53, at 27-28.

57. The congressional declaration of policy stated: "The development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security" 42 U.S.C. § 2011(a) (1976).

58. Statements made during the debate over § 271 and other proposed amendments support this interpretation.

"MR. HICKENLOOPER We take the position that electricity is electricity. Once it is produced it should be subject to the proper regulatory bodies, . . . We feel that there is no difference and that it should be treated as all other electricity which is regulated by the public. . . .

"MR. HUMPHREY. . . . I agree. . . . The fact is it becomes electricity. . . . I see no reason why electricity should be treated any differently because of the parentage of the generation." 100 CONG. REC. 11567 (1954), *reprinted in* 3 LEGISLATIVE HISTORY OF THE ATOMIC ENERGY ACT OF 1954 3760 (1955) [hereinafter cited as LEGISLATIVE HISTORY].

59. Atomic Energy Act of 1954, ch. 1073, § 271, 68 Stat. 960 (codified as amended at 42 U.S.C. § 2018 (1976)).

60. 100 CONG. REC. 11709 (1954), *reprinted in* LEGISLATIVE HISTORY, *supra* note 58, at 3834. *See also* Cavers, *Legislative Readjustments in Federal and State Regulatory Powers Over Atomic Energy*, *Symposium on Atomic Energy and the Law*, 46 CALIF. L. REV. 22, 26-29 (1958); Murphy & La Pierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Preemption*, 76 COLUM. L. REV. 392, 407-08 (1976).

61. This clarification of intent was prompted by the ruling in *Maun v. United States*, 347 F.2d 970 (9th Cir. 1965), upholding a local ordinance based on § 271, that prohibited overhead transmission lines of a capacity needed for an AEC licensed facility. Congress passed an amended version of § 271 immediately after the decision, nullifying the holding in *Maun*. The new section added that "this section shall not be deemed to confer upon any Federal, State, or local agency any authority to regulate, control, or restrict any activities of the Commission." 42 U.S.C. § 2018 (1976).

Congress also used the opportunity to restate its intent to exclusively regulate only the unique aspects of nuclear power. "[AEC licensees] are subject to AEC's control with respect to the common defense and security and protection of the health and safety of the public with respect to the special hazards associated with nuclear facilities, and otherwise to any and all applicable Federal, State, and local regulations with respect to the generation, sale, or transmission of electric power." H.R. REP. NO. 567, 89th Cong., 1st Sess. 9-10, *reprinted in* 1965 U.S. CODE CONG. & AD. NEWS 2775, 2784.

In 1959, Congress passed section 274, an amendment to the 1954 Act.⁶² The purpose of the new section was to recognize the interests of the states and to clarify their responsibilities in the regulation of byproduct, source, and special nuclear materials.⁶³ A reexamination of these responsibilities was necessary in light of rapid developments in the field and a corresponding increase in local regulation.⁶⁴ Section 274 sought to establish an orderly regulatory pattern between the states and the AEC⁶⁵ and to discontinue federal responsibility in areas in which the states had the capacity to regulate.⁶⁶

The amendment authorized the AEC to enter into agreements with states that would allow states to regulate source, byproduct, and special nuclear materials in order to protect the public from radiation hazards.⁶⁷ The AEC nonetheless retained *exclusive* authority over the construction and operation of production or utilization facilities.⁶⁸ Sec-

62. Act of September 23, 1959, Pub. L. No. 86-373, § 1, 73 Stat. 688 (codified as amended at 42 U.S.C. § 2021 (1976 & Supp. III 1979)).

63. 42 U.S.C. § 2021(a)(1) (1976). For an explanation of these terms, see note 54 *supra*.

64. See JOINT COMM. ON ATOMIC ENERGY, SELECTED MATERIALS ON FEDERAL-STATE COOPERATION IN THE ATOMIC ENERGY FIELD, 86TH CONG., 1ST SESS. (1959); *Symposium on Atomic Energy and the Law*, 46 CALIF. L. REV. 1, (1958). The note of the need for further congressional delineation of state authority sounds much the same today. See, e.g., Parenteau, *Regulation of Nuclear Power Plants: A Constitutional Dilemma for the States*, 6 ENVTL. L. 675 (1976); Note, *Nuclear Power Regulation: Defining the Scope of State Authority*, 18 ARIZ. L. REV. 987 (1976); Comment, *Federal Preemption of State Laws Controlling Nuclear Power*, 64 GEO. L.J. 1323 (1976); Note, *Nuclear Power Plant Siting: Additional Reductions in State Authority?*, 28 U. FLA. L. REV. 439 (1976); Note, *Application of the Preemption Doctrine to State Laws Affecting Nuclear Power Plants*, 62 VA. L. REV. 738 (1976).

65. 42 U.S.C. § 2021(a)(3) (1976).

66. 42 U.S.C. § 2021(a)(4), (6) (1976).

67. 42 U.S.C. § 2021(b) (Supp. III 1979). An agreement was conditioned upon an AEC finding that the state program was "compatible" with the commission's program for the regulation of such hazards. 42 U.S.C. § 2021(d)(2) (Supp. III 1979). In addition, the state's governor had to certify that the state had a "program for the control of radiation hazards adequate to protect the public health and safety" with respect to the materials covered by the agreement. 42 U.S.C. § 2021(d)(1) (1976).

68. 42 U.S.C. § 2021(c)(1) (1976). The AEC also was prohibited from entering into an agreement that would discontinue any of its responsibilities over the export and import of such materials and facilities, and for the disposal into the sea of such materials. 42 U.S.C. § 2021(c)(2)-(3) (1976).

The statement that the AEC expected to discontinue more of its responsibilities when it deemed the states capable of assuming authority together with the required assurance of state competence, see note 67 *supra*, supports the view that the AEC desired to regulate only those aspects of nuclear power that the states were technologically incapable of regulating themselves (excluding the issues involving foreign affairs). In 1959, the AEC did not feel that the states were able to protect the public from the hazards of nuclear reactors. "Licensing and regulation of more dangerous activities—such as nuclear reactors—will remain the exclusive responsibility of the Commission. Thus a line is drawn between types of activities deemed appropriate for regulation by individual States at this time, and other activities where continued AEC regulation is necessary. . . . [T]his is interim legislation. The committee believes that the uses of atomic energy will be so widespread in future years that

tion 274(k) states that the 1959 amendments in no way preempted state authority to regulate nonradiation hazards. "Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes *other than protection against radiation hazards*."⁶⁹

The comments of the Joint Committee on Atomic Energy show that Congress intended, although it was never expressly asserted, to preempt state regulation of nuclear material when the AEC retained regulatory authority.⁷⁰

It is not intended to leave any room for the exercise of dual or concurrent jurisdiction by States to control radiation hazards by regulating byproduct, source, or special nuclear materials. The intent is to have the material regulated and licensed either by the Commission, or by the State and local governments, but not by

states should continue to prepare themselves for increased responsibilities." S. REP. NO. 870, 86th Cong., 1st Sess. 8-9, *reprinted in* 1959 U.S. CODE CONG. & AD. NEWS 2872, 2879-80. Thus, the AEC's exclusive regulation in these areas was based on state capacity, or lack thereof, to adequately regulate rather than on a desire to maintain centralized control over the development of nuclear power.

69. 42 U.S.C. § 2021(k) (1976) (emphasis added). Subsection (k)'s affirmance of state power to regulate for purposes other than radiation hazards must be reconciled with subsection (c)'s apparent declaration of AEC's exclusive and total authority for the construction and operation of nuclear reactors. Although subsection (c), by itself, could be read as preempting all state regulation of the construction and operation of nuclear plants, it is more likely, in view of the other subsections, that subsection (c) merely meant that the AEC was not to relinquish any of its already existing exclusive authority over this aspect of nuclear power. According to the 1954 Act and its legislative history, this exclusive jurisdiction was limited to the regulation of the special hazards, such as radiation, associated with nuclear power. *See* notes 58-61 and accompanying text *supra*. Subsection (k) states that this preservation of exclusivity is not to be read as expanding preemption to include state regulation of activities for nonradiation purposes. Furthermore, because § 274 is primarily concerned with state regulation of radiation hazards, subsection (c) should not be construed as being concerned with matters other than radiation hazards.

70. S. REP. NO. 870, *supra* note 68 at 8, 1959 U.S. CODE CONG. & AD. NEWS at 2879. Some reasons for Congress not explicitly stating the precise areas of preemption in the amendments are given in Murphy & La Pierre, *supra* note 60, at 398-405. First, the AEC felt that preemption was "substantially implicit" in the amendment. *Hearings Before the Joint Comm. on Atomic Energy on Federal-State Relationships in the Atomic Energy Field*, 86th Cong., 1st Sess. 489 (1959) [hereinafter cited as *1959 Hearings*].

Second, the AEC felt that by explicitly stating the areas of preemption, it would be forced into fixing the scope of preemption. The AEC sought to "avoid defining the precise extent of that preemption, feeling that it is better to leave these kinds of detailed questions perhaps up to the courts later to be resolved." *1959 Hearings, supra*, at 308, *quoted in* *United States v. City of New York*, 463 F. Supp. 604, 610 (S.D.N.Y. 1978).

Representative Durham disapproved of the AEC's intent. "I don't agree in writing an act like that. I think it should be clearly defined and understood what is our field and what is their field. . . . I think the law should be as clear as possible to avoid litigation." *1959 Hearings, supra*, at 308, *quoted in* *Northern States Power Co. v. Minnesota*, 447 F.2d 1143, 1156 (8th Cir. 1971) (Van Oosterhout, J., dissenting). Compare this view with Congress' statement that it is their responsibility to spell out their intent, *supra* note 45.

both.⁷¹

Specifically referring to section 274(k), the committee said:

This subsection is intended to make it clear that the bill does not impair the State authority to regulate activities of AEC licensees for the manifold health, safety, and economic purposes *other than radiation protection*. As indicated elsewhere, the Commission has exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility.⁷²

In 1972, in *Northern States Power Co. v. Minnesota*,⁷³ the Supreme Court affirmed a federal court of appeals ruling that the 1954 Act and the 1959 amendments show the "federal government has exclusive authority under the preemption doctrine to regulate the construction and operation of nuclear power plants" for radiation hazards.⁷⁴ In every nuclear power preemption case since *Northern States*, implied preemption of state regulation of nuclear power for purposes of protection from radiation hazards has been found.⁷⁵ Congress has indicated that

71. S. REP. NO. 870, *supra* note 68 at 9, reprinted in 1959 U.S. CODE CONG. & AD. NEWS 2872, 2879.

72. *Id.* at 12, 1959 U.S. CODE CONG. & AD. NEWS at 2879 (emphasis added).

73. 447 F.2d 1143 (8th Cir. 1971), *aff'd mem.*, 405 U.S. 1035 (1972).

74. 447 F.2d at 1154. Although the court's conclusion did not explicitly state that the preemption pertaining to the construction and operation of nuclear power plants was confined to regulations for radiation hazard purposes, the court's analysis indicated that this area of preemption was indeed so limited. The court said, "The only logically acceptable reason for inclusion of subsection (k) within 2021 was to make it clear that Congress was not, by subsection (c) of the 1959 amendment, in any way further limiting the power of the states to regulate activities, *other than radiation hazards*, associated with those areas over which the AEC was forbidden to relinquish its control." *Id.* at 1150 (emphasis in original). See note 69 *supra*.

75. See, e.g., *General Elec. Co. v. Fahner*, No. 80 Civ. 6835 (N.D. Ill. Oct. 12, 1981) (state regulation of radioactive material preempted in the absence of a "section 274 agreement" with the NRC); *United States v. City of New York*, 463 F. Supp. 604 (S.D.N.Y. 1978) (state regulation and licensing of operation and construction of nuclear reactors, for radiological health and safety reasons preempted). Before *Northern States*, the problem had not arisen in federal court.

State court decisions include *Northern Cal. Ass'n to Preserve Bodega Head & Harbor, Inc. v. Public Util. Comm'n*, 61 Cal. 2d 126, 390 P.2d 200, 37 Cal. Rptr. 432 (1964) (state could not regulate radiological safety); *Marshall v. Consumers Power Co.*, 65 Mich. App. 237, 237 N.W.2d 266 (1975) (state could not regulate the emergency core-cooling system because they were prohibited from regulating radioactive hazards); *Public Interest Research Group of N.J., Inc. v. State Dep't of Envtl. Protection*, 152 N.J. Super. 191, 377 A.2d 915 (1977) (state has no authority to impose either higher or lower safety standards than those of the NRC to regulate radiation hazards); *State Dep't of Envtl. Protection v. Jersey Cent. Power & Light Co.*, 69 N.J. 102, 351 A.2d 337 (1976) (utility could not be penalized by the state for killing fish during a cold water discharge mandated by NRC operating regulations).

the *Northern States* analysis of its intent is correct.⁷⁶

Similarly, courts have repeatedly held that the states are not preempted from regulating nuclear power for purposes other than protection from radiation hazards.⁷⁷ The Supreme Court has said that the states may prohibit nuclear power on economic grounds.⁷⁸ The Nuclear Regulatory Commission (NRC), which also considers its authority to be exclusive in radiologic safety matters,⁷⁹ recognizes that the states have authority in all other areas.⁸⁰ Thus, the lines of preemption have been drawn: States may regulate nuclear power only for purposes other than protection from radiation hazards.

The Clean Air Act Amendments of 1977⁸¹ subject radioactive air pollutants to regulation under the Act.⁸² Following *Northern States*, radioactive air pollutants had been considered part of the radiologic hazards associated with the operation of a nuclear power plant, thus under the exclusive jurisdiction of the NRC. The 1977 amendments granted to both the Environmental Protection Agency and the states the authority to regulate radioactive air pollutants for the first time.⁸³

The Clean Air Act Amendments are consistent with congressional intent to regulate exclusively only those areas that it feels the states are

76. 2 SENATE COMM. OF PUBLIC WORKS, A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, 93d Cong., 1st Sess. 1265-66 (1973). See also *Train v. Colorado Pub. Interest Research Group, Inc.*, 426 U.S. 1, 14-17 (1976).

77. See, e.g., *Northern Cal. Ass'n to Preserve Bodega Head & Harbor, Inc. v. Public Util. Comm'n*, 61 Cal. 2d 126, 133, 200 P.2d 200, 204, 37 Cal. Rptr. 432, 436 (state can take into account earthquake faults when zoning power plants because this involves considerations apart from radiological hazards); *Marshall v. Consumers Power Co.*, 65 Mich. App. 237, 259, 237 N.W.2d 266, 280 (1975) (AEC license is not a federal order to build a nuclear plant; federal licensees must still conform to state common law).

78. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 550 (1978).

79. 10 C.F.R. § 8.4 (1981).

80. *In re Consolidated Edison Co. of N.Y., Inc.*, 7 N.R.C. 31 (Atomic Safety and Licensing App. Bd. 1978). "States retain the right, even in the face of the issuance of an NRC construction permit, to preclude construction on such bases as a lack of need for additional generating capacity or the environmental unacceptability of the proposed facility or site." *Id.* at 34.

81. 42 U.S.C. §§ 7401-7642 (Supp. III 1979).

82. 42 U.S.C. § 7422 (Supp. III 1979).

83. The House Report states that the amendments "would not preempt States from setting and enforcing stricter air pollution standards for radiation than the Federal standards and would not follow the holding of *Northern States Power Co. v. Minnesota* . . . in the context of radioactive air pollution" (citation omitted). H.R. REP. NO. 294, 95th Cong., 1st Sess. 43 n.8, reprinted in 1977 U.S. CODE CONG. & AD. NEWS 1077, 1121 n.8. The report noted that this may "necessitate extra caution in the construction, operation, and maintenance of nuclear facilities" *Id.* at 43, 1977 U.S. CODE CONG. & AD. NEWS at 1121. Thus, a state regulation enacted for a purpose that is not preempted may encroach upon a preempted area yet escape preemption. See notes 38-44 and accompanying text *supra*.

not technically competent to manage. As the states have gained expertise in nuclear power, Congress has delegated greater regulatory responsibility to them.⁸⁴ Thus, the Clean Air Act now allows the states a special exception to their general lack of authority to regulate the construction and operation of nuclear power plants for radiological health and safety reasons. States continue to retain their authority to regulate special nuclear byproduct and source materials for radiation hazards and, pursuant to the 1977 amendments to the Clean Air Act, they may regulate the construction and operation of nuclear power plants for hazards from radioactive air pollutants.

B. California's Nuclear Power Regulations

The California statutes challenged by PG&E fall into two groups: (1) the power plant siting provisions of the Warren-Alquist Act,⁸⁵ enacted in 1974;⁸⁶ and (2) the three amendments to that Act which were enacted in 1976.⁸⁷ The Warren-Alquist Act established a "one-stop" licensing and siting procedure for all thermal power plants.⁸⁸ The 1976 amendments deal exclusively with the licensing of nuclear power plants. It is therefore necessary to examine each group of regulations separately.

1. *The Warren-Alquist Act*

Prior to the Warren-Alquist Act, a utility was required to obtain a certificate of convenience and necessity from the California Public Utilities Commission (CPUC) before it could construct a power plant in California.⁸⁹ It also had to obtain permits from a myriad of federal, state, and local agencies.⁹⁰ Each agency had jurisdiction over some particular aspect of the power plant or its environment concurrently with the CPUC. Under the Public Utilities Code, the CPUC had (and

84. See notes 67-69 and accompanying text *supra*.

85. See notes 5 & 8 *supra*.

86. This Act became effective January 7, 1975.

87. CAL. PUB. RES. CODE § 25524.1-.3 (West 1977 & Supp. 1981).

88. A thermal power plant converts heat energy into electrical energy. Geothermal, nuclear, oil-fired, and coal-fired power plants are examples of thermal power plants. Hydroelectric sources of power, for example, are not.

For a description of the entire Warren-Alquist Act, CAL. PUB. RES. CODE §§ 25000-25968 (West 1977 & Supp. 1981), see Note, *California's Energy Commission: Illusions of a One-Stop Power Plant Siting Agency*, 24 U.C.L.A. L. REV. 1313 (1977).

89. CAL. PUB. UTIL. CODE § 1001 (West 1975).

90. Nearly thirty permits from other agencies were required. STAFF REPORT TO THE JOINT COMM. ON ENERGY POLICY AND IMPLEMENTATION, ENERGY ADMINISTRATION AND REGULATION IN CALIFORNIA: AN ANALYSIS 28 (1979).

still has)⁹¹ the general authority to "supervise and regulate every public utility in the State and may do all things . . . which are necessary and convenient in the exercise of such power and jurisdiction."⁹² It is empowered to require the utilities to furnish "reasonable service . . . as [is] necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public."⁹³

This procedure came under criticism in the early 1970's⁹⁴ when both long and short range energy problems became apparent. Under this regulatory scheme, there was neither long range planning for land use or energy demand nor public participation in the planning process. Extensive duplication and conflict among the various agencies was the norm. Furthermore, review of a utility's plans generally came only after substantial utility commitment, by which time the utility was primarily interested in protecting its investment.⁹⁵

Faced with these problems, the legislature held hearings⁹⁶ and commissioned several studies⁹⁷ to recommend better siting procedures. The legislature identified four essential functions of a proposed new energy agency:⁹⁸ (1) forecasting of and planning for energy demand; (2) research and development of energy sources; (3) conservation en-

91. A certificate of convenience and necessity may not be issued, however, unless the Energy Commission created by the Warren-Alquist Act, *see* note 100 and accompanying text *infra*, approves the proposed facility beforehand. CAL. PUB. RES. CODE § 25518 (West 1977).

92. CAL. PUB. UTIL. CODE § 701 (West 1975).

93. CAL. PUB. UTIL. CODE § 451 (West 1975 & Supp. 1981). The CPUC also has the power to require that the "rules, practices, equipment, appliances, facilities, or service of any public utility, or the methods of manufacture, distribution, transmission, storage, or supply employed by it" are operated in a reasonable, efficient, and safe manner. *Id.* at 761. The CPUC may order that "additions, extensions, repairs, or improvements to, or changes in, the existing plant, equipment, apparatus, facilities, or other physical property of any public utility . . . [be made] to promote the security or convenience of its employees or the public." *Id.* at 762.

Furthermore, the commission may "require every public utility to construct, maintain, and operate its line, plant, system, equipment, . . . and premises in such manner as to promote and safeguard the health and safety of its employees, passengers, customers, and the public." *Id.* at 768.

94. *See, e.g.*, STAFF REPORT TO THE JOINT COMM. ON ENERGY POLICY & IMPLEMENTATION, *supra* note 90, at 28.

95. *See Subcomm. on State Energy Policy of the Assembly Comm. on Planning and Land Use, Hearings on State Energy Policy, Part V: Power Plant Siting* (1973) [hereinafter cited as *Hearings on Power Plant Siting*].

96. *Id.*

97. THE RAND CORPORATION, CALIFORNIA'S ELECTRICITY QUANDARY (1972), CALIFORNIA INSTITUTE OF TECHNOLOGY, ENVIRONMENTAL QUALITY LABORATORY, STATE POWER SITING: A SKETCH OF THE MAIN FEATURES OF A POSSIBLE APPROACH (1973). *See also* STANFORD RESEARCH INSTITUTE, MEETING CALIFORNIA'S ENERGY REQUIREMENTS, 1975-2000 (1973) (commissioned by the utilities).

98. The utilities and the state agreed that a central authority was a necessary feature of an efficient and effective system, *Hearings on Power Plant Siting, supra* note 95, at 67, 195.

couragement; and (4) an improved power plant siting process.⁹⁹ The Warren-Alquist Act subsequently created the Energy Resources Conservation and Development Commission (Energy Commission) with authority over these four concerns.¹⁰⁰

To streamline the siting process, the legislature gave the Energy Commission "the exclusive power to certify all sites" and declared that a certificate from the Commission shall be "in lieu of any permit, certificate, or similar document required by any state, local or regional agency, or federal agency to the extent permitted by federal law."¹⁰¹

Under the siting procedures established by the Act, any utility that proposes to build a thermal power plant must file a notice of intention (NOI) to apply for an application for certification.¹⁰² The NOI is used to determine the suitability of the proposed site.¹⁰³ It must state the location of the site, the proposed design of the new facility, the methods of construction and operation, and the type of fuel to be used.¹⁰⁴ In addition, it must identify at least three alternative sites¹⁰⁵ (at least two of which must be acceptable for the NOI to be approved),¹⁰⁶ along with the relative economic, technological, and environmental advantages and disadvantages of each site.¹⁰⁷

The Commission holds public informational and nonadjudicatory hearings on the NOI,¹⁰⁸ identifies issues to be considered in later stages of the siting process, and determines those which can be immediately eliminated from further consideration.¹⁰⁹ The Commission then holds adjudicatory hearings¹¹⁰ and examines the appropriateness of the

99. *Hearings on Power Plant Siting*, *supra* note 95, at 7.

100. CAL. PUB. RES. CODE §§ 25200-25224 (West 1977 & Supp. 1981). Sections 25300-25323 provided for electrical energy demand planning and forecasting, §§ 25400-25486 for energy resources conservation, §§ 25500-25542 for power plant siting, §§ 25600-25615 for research and development, §§ 25700-25705 for energy shortage contingency planning, and §§ 25800-25804 established a conservation and development account.

101. CAL. PUB. RES. CODE § 25500 (West 1977).

102. *Id.* at § 25502.

103. *Id.*

104. *Id.* at § 25504.

105. *Id.* at § 25503 (West 1977 & Supp. 1981).

106. *Id.* at § 25516.

107. *Id.* at § 25504 (West 1977).

108. *Id.* at § 25509 (West 1977 & Supp. 1981). Open planning, that is, early public participation in the siting process, had been emphasized during the hearings on the Warren-Alquist Act in order to eliminate the adversarial nature of the then-existing siting procedures and to insure the environmental acceptability of a proposed site. See Statement of James Krier, *Hearings on Power Plant Siting*, *supra* note 95, at 16. The utilities supported the open planning proposal. *Subcomm. on State Energy Policy of the Assembly Comm. on Planning and Land Use, Hearings on State Energy Policy, Part VI: Review of AEC Nuclear Safety Criteria* 198 (1973).

109. CAL. PUB. RES. CODE § 25512 (West 1977 & Supp. 1981).

110. *Id.* at § 25513.

site.¹¹¹ Before issuing its final report, the Commission must review the safety and reliability of the proposed plant and must require detailed information from the utility on the proposed emergency systems and safety precautions, the plans for handling and storing wastes and fuels, and the special seismic features of the plant.¹¹² For nuclear plants, information is required on proposed methods to prevent illegal diversion of nuclear fuels and to control density of population in the area surrounding the facility.¹¹³ The Commission then decides whether or not to approve the NOI.¹¹⁴

If approved, the utility must file an application for certification (AFC).¹¹⁵ The AFC must contain the information on safety and reliability given in the NOI in greater detail.¹¹⁶ The Commission holds public hearings on the AFC¹¹⁷ and must issue a written decision on the AFC within eighteen months after it is filed.¹¹⁸

2. Nuclear Power

The 1976 amendments to the Warren-Alquist Act deal with three specific technical aspects of nuclear power. To understand these provisions and the reasons for their enactment, it is necessary to examine briefly how nuclear power is produced.¹¹⁹ Resolution of the preemption issues in *Pacific Legal Foundation* is dependent on careful consideration of the scientific controversy. This is evidenced by the fact that the legal and political controversy has arisen because of scientific and technological uncertainty.

111. *Id.* at § 25511.

112. *Id.*

113. *Id.*

114. *Id.* at § 25516.

115. *Id.* at § 25519.

116. *Id.* at § 25520 (West 1977). The information required includes a description of the design, construction and operation of the proposed facility, available site information (geologic, seismic, ecological, aesthetic, water supply and population data), a statement of need for the facility, the type and cost of fuel to be used, the cost of the plant, and the cost of the operation.

117. CAL. PUB. RES. CODE § 25521 (West 1977).

118. *Id.* at § 25522.

119. Other articles that present the technological side of the controversy are Tribe, *California Declines The Nuclear Gamble: Is Such a State Choice Preempted?*, 7 *ECOLOGY L.Q.* 679 (1979); Comment, *Slaying the Nuclear Giants: Is California's New Nuclear Power Plant Siting Legislation Shielded Against the Attack of Federal Preemption?*, 8 *PAC. L.J.* 741 (1977); Note, *California's Nuclear Power Plant Siting Legislation: A Preemption Analysis*, 52 *S. CAL. L. REV.* 1189 (1979).

a. Reactor Operation

Nuclear reactors operate on the principle of fission.¹²⁰ In fission, a heavy element such as uranium (U) or plutonium (Pu) absorbs a neutron and splits into two lighter elements, releasing two or three more neutrons and a large amount of energy.¹²¹ A chain reaction develops when at least one of the released neutrons initiates another fission. In commercial power reactors, the speed of the reaction is controlled so that a constant stream of energy is produced.¹²²

Part of the released energy is in the form of heat. The heat is used to change water into steam, and the steam turns the generating turbines that produce electricity. The water also serves to cool the reactor,¹²³ for the heat is so intense that without adequate cooling the fuel would melt its containers and then melt through the floor of the reactor building. If the superheated fuel came into contact with water in the ground, a steam explosion could result, releasing deadly clouds of radioactive gas into the atmosphere.

Because of this danger, measures are taken to insure that the reactor is constantly cooled. All reactors have an emergency core-cooling system to operate in case of a loss-of-coolant accident. No emergency core-cooling system, however, has been tested in full-scale operation. The potential safety threat to nearby populations in case of a loss-of-coolant accident is a major source of debate between supporters and

120. NUCLEAR ENERGY POLICY STUDY GROUP, NUCLEAR POWER ISSUES AND CHOICES 389-405 (1977) [hereinafter cited as ISSUES AND CHOICES]. See generally J. HOGERTON, ATOMIC FUEL (1964); R. LYERLY & W. MITCHELL, NUCLEAR POWER PLANTS (1973).

121. Materials which can fission on the absorption of a neutron are called fissile. U-235, Pu-239, and U-233 are all fissile. Natural uranium is 0.7% U-235, with the rest being U-238. Reactor fuel must be at least 3% U-235 (uranium for nuclear weapons must be at least 90% U-235). Thus, natural uranium must be "enriched" before it is used in a reactor or weapon.

On absorption of a fast neutron, U-238 becomes Pu-239. The plutonium produced from this absorption, if separated from the other fission products, can be used as new fuel. A reactor thus has the potential to produce more fuel than it consumes. Such reactors, called breeders (normal reactors, which use more fuel than they produce, are called converters and use slow neutrons because they are more likely to cause a fission), possess an obvious advantage in fuel supply, but the plutonium used and produced in breeders can also be used in weapons. Because of the alleged proliferation problems, President Carter deferred the date when the breeder will be put to commercial use. Nuclear Power Policy, 13 WEEKLY COMP. PRES. DOC. 502, 503 (April 7, 1977). Although President Reagan has decided to proceed with the development of breeder technology, breeders are still not expected to come into service for 20 to 30 years. N.Y. Times, Oct. 9, 1981, at 1, col. 1.

122. In a nuclear bomb, the speed at which the chain reaction progresses is uncontrolled. There are not enough neutrons released in a commercial reactor to produce a nuclear explosion.

123. Three-fourths of the reactors in the United States are cooled by ordinary, or light, water; hence the name light-water reactor. Heavy water (D₂O), gas, and liquid metals (such as sodium) are also used to cool reactors. ISSUES AND CHOICES, *supra* note 120, at 392.

opponents of nuclear power.¹²⁴

b. Reprocessing

Spent fuel must be removed from the reactor when only one or two percent of the fuel atoms have been used because of the physical distortion of fuel rods and the absorption of neutrons by the fission products.¹²⁵ Recovering the unused fuel by a method known as reprocessing would reduce uranium needs by twenty-two percent and enrichment requirements by fourteen percent.¹²⁶

Until recently, it was generally assumed that spent fuel would be reprocessed. To date, however, spent fuel has been stored at reactor facilities, and still waits there to be shipped off for reprocessing. Reprocessing has never become commercially feasible. Skyrocketing costs have cast doubt on the economic advantages of reprocessing,¹²⁷ and none of the three reprocessing plants that have been built in the United States has ever operated as planned.¹²⁸ There have been no

124. Much of the controversy has centered around the NRC's Reactor Safety Study, also known as the Rasmussen Report. U.S. NUCLEAR REGULATORY COMM'N, REACTOR SAFETY STUDY: AN ASSESSMENT OF ACCIDENT RISKS IN U.S. COMMERCIAL NUCLEAR POWER PLANTS—MAIN REPORT (WASH—1400) (NUREG—75/014) (1975). The Rasmussen Report studied the emergency core-cooling system and calculated the probabilities of various accidents. For the most serious accident, which the report estimated had a probability of one in two hundred million years of reactor operation, the consequences would be three or four thousand deaths within a few weeks, tens of thousands of deaths over thirty years, a comparable number of genetic defects over successive generations, and around \$14 billion in property damage. The report concluded that the average rate of loss for a 1,000 MWe nuclear power plant would be about 0.02 fatalities per year, compared with two to twenty-five fatalities per year estimated for a coal plant of the same capacity.

The Rasmussen Report's methodology for estimating the reliability of the ECCS and the number of possible deaths has been severely criticized. It is alleged that the report does not represent the true risks of nuclear power. The pronuclear, yet cautious, Ford Foundation study concluded that the Rasmussen estimates are too low. ISSUES AND CHOICES, *supra* note 120, at 240-41. The California legislature, in its hearings on Proposition 13, *see* notes 154-73 and accompanying text *infra*, noted the doubts about the report's accuracy. CALIFORNIA STATE ASSEMBLY COMM. ON RESOURCES, LAND USE, AND ENERGY, REASSESSMENT OF NUCLEAR ENERGY IN CALIFORNIA, A POLICY ANALYSIS OF PROPOSITION 13 AND ITS ALTERNATIVES 42-50 (1976) [hereinafter cited as REASSESSMENT]. On January 19, 1979, the NRC withdrew its support for the Rasmussen Report. 9 ENV'T REP. (BNA) 1768 (1979).

125. J. HOGERTON, *supra* note 120, at 19. Not all of the spent fuel is removed at once. Each LWR is shut down annually for a period of three weeks when about one-third of the fuel elements are replaced. ISSUES AND CHOICES, *supra* note 120, at 401.

126. ISSUES AND CHOICES, *supra* note 120, at 319.

127. Initial reprocessing costs were \$30 per kilogram of fuel, REASSESSMENT, *supra* note 124, at 25, while 1977 estimates reached the \$200-\$400 per kilogram range. ISSUES AND CHOICES, *supra* note 120, at 325.

128. The Nuclear Fuel Services plant in West Valley, New York, cost \$30 million to build and reprocessed only 630 metric tons of fuel. The West Valley plant shut down because it was close to exceeding the limits on personnel exposure to radiation. Six hundred thousand gallons of high-level waste are left sitting in the plant. President Carter signed a

reprocessing plants in operation in the United States since 1972.¹²⁹

Thus, spent fuel continues to fill up storage pools at reactors. At-reactor spent-fuel storage pools now in existence were designed to hold spent fuel only temporarily until reprocessing—not to store all the spent fuel produced over a reactor's lifetime.¹³⁰ Despite claims that the technology exists to store spent fuel temporarily at sites away from a reactor "without endangering the public's health and safety,"¹³¹ there are currently no such facilities.¹³² Furthermore, utilities have been unwilling to try to dispose of their spent fuel permanently until the fate of reprocessing is certain.¹³³ Given the backlog of spent fuel and the lack of alternatives to storage at-reactor, several reactors will close down

bill that requires the DOE to develop a plan to clean up these wastes. 11 ENV'T REP. (BNA) 798 (1980). The Department of Energy estimates the total clean-up cost to be about \$1.1 billion. Ninety percent would be paid by the federal government and the rest by the State of New York. 11 ENV'T REP. (BNA) 284 (1980).

General Electric Company built a regional reprocessing plant in Morris, Illinois, which also was never operated as planned. It was closed in 1974, after an investment of \$64 million. ISSUES AND CHOICES, *supra* note 120, at 321-22.

Allied General Nuclear Services' plant, in Barnwell, South Carolina, was to reprocess 1500 tons per year by 1975. Undeveloped waste disposal technology and uncertain economics (the projected cost increased by a factor of ten over the original estimate of \$70 million) stopped development. *Id.* at 322.

129. The only reprocessing plant in the world operating on a commercial scale is located in La Hague, France. *Id.* at 322.

130. At reactor storage pools typically have a capacity of 1½ to 1¾ cores. Ten to thirteen cores are discharged over a plant's useful lifetime. NUCLEAR FUEL CYCLE COMM., CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMM'N, STATUS OF NUCLEAR FUEL REPROCESSING, SPENT FUEL STORAGE, AND HIGH-LEVEL WASTE DISPOSAL, DRAFT REPORT 99 (1978) [hereinafter cited as NFCC DRAFT REPORT]. Long term at-reactor storage is also an area of technological uncertainty. Given that nuclear power is a relatively new energy source, there has been no experience with at-reactor storage for periods of 20-50 years. *Id.* at 104.

131. IRG REPORT, *supra* note 7, at 67.

132. *See* note 134 *infra*.

133. To encourage the nonproliferation of nuclear weapons (reprocessed plutonium can be used in weapons), President Carter deferred "indefinitely the commercial reprocessing and recycling of plutonium produced in U.S. nuclear power programs." Nuclear Power Policy, 13 WEEKLY COMP. PRES. DOC. 502 (April 7, 1977). President Reagan, however, intends to lift President Carter's ban and to proceed with reprocessing. Legislation will be necessary to implement this policy. N.Y. Times, Oct. 9, 1981, § 1, at 1, col. 1. The NRC blames the uncertainty about reprocessing for the fact that utilities are not constructing away from a reactor storage themselves. 10 ENV'T REP. (BNA) 556 (1979).

unless more storage space is found.¹³⁴

c. Permanent Waste Disposal

Spent fuel also poses a permanent disposal problem.¹³⁵ A nuclear reactor produces about thirty metric tons of spent fuel per year.¹³⁶ Each ton contains about thirty kilograms of fission products, which give off intense heat and radiation as they decay.¹³⁷ The radioactivity decreases by a factor of 1000 over the first ten years, but it takes one thousand more years for the radioactivity to decrease by another factor of 1000.¹³⁸ For permanent disposal, these wastes (called high-level wastes) must be isolated in a stable environment for time spans on the order of a quarter of a million years.¹³⁹

There are currently no proven ways of isolating wastes in a stable environment. While several methods are being investigated,¹⁴⁰ none of

134. The accumulation of spent fuel threatens reactor operation in two ways. First, there is a loss of full-core discharge capacity (FCDC). Full-core discharges are necessary for certain NRC inspections and loss of FCDC magnifies the risks in case of an accident.

Second, there is a loss of reload discharge capability (RDC). This means there is insufficient storage space for the spent fuel, making its removal from the core impossible. NFCC DRAFT REPORT, *supra* note 130, at 100.

The NRC says more storage space is needed by 1983 to prevent shutdowns. 10 ENV'T REP. (BNA) 556 (1979). The DOE estimates that 4,000 tons of storage space will be needed by 1988. *Id.* In 1976, when California considered the problem, 1000 tons of spent fuel were backed up in the fuel cycle. REASSESSMENT, *supra* note 124, at 23. According to one person, in the industry, a shutdown induced by the lack of spent fuel storage space "does not represent a serious safety problem but it does represent an economic embarrassment of the highest sort." 7 *The Nuclear Initiative: Hearings on Prop. 15 Before the California State Assembly Comm. on Resources, Land Use, and Energy* pt. 1, 177 (1975) (statement of A.E. Schubert, President, AGNS, Barnwell, S.C.) [hereinafter cited as *Hearings on Prop. 15*].

135. See, e.g., Cohen, *The Disposal of Radioactive Waste from Fission Reactors*, 236 SCI. AM. 21 (June 1977).

136. ISSUES AND CHOICES, *supra* note 120, at 246. See generally C. FOX, RADIOACTIVE WASTES (1969).

137. Each ton also contains a little less than ten kilograms of transuranic elements, and the rest is unburned uranium containing approximately 0.8% U-235. The transuranic wastes have long half-lives. Pu-239, for example, has a half-life of over 24,000 years. Pu-239 is extremely toxic and creates cancer risks if quantities as small as one ten-millionth of a gram are inhaled. Pu-238, which is 2.5% of the plutonium in spent uranium fuel, has a half-life of 86 years, but is several hundred times as radioactive as Pu-239. The adverse biological effects of the radioactive fission products such as iodine-129, strontium-90, cesium-137, and technetium-99 are well documented. See ISSUES AND CHOICES, *supra* note 120, at 246-47.

138. REASSESSMENT, *supra* note 124, at 68.

139. Finding a stable and isolated depository in the earth is difficult, for "the action of deliberate emplacement disrupts qualities one desires from geologic disposal—absence of a route to the surface and relative inertness." NFCC DRAFT REPORT, *supra* note 130, at 117.

140. The lack of development of an effective and safe permanent waste disposal method can be attributed to the existence of temporary storage and to the failure to assign direct responsibility for waste disposal. Industry and the federal government have each tried to place the responsibility on the other. Recently, however, Congress has begun to budget more money for research on this issue. A total of \$206 million had been budgeted for waste

these methods is likely to achieve full-scale operation for at least another fifteen to thirty years.¹⁴¹ Critics doubt that a safe permanent disposal method can ever be found.¹⁴²

The experience with waste disposal has been disappointing. Both sites chosen by the government as permanent repositories were later rejected,¹⁴³ and no new site is to be chosen until 1985.¹⁴⁴ High-level waste disposal sites used by the military have been plagued by dangerous leaks.¹⁴⁵ Despite this track record, the federal government, utilities, and many scientists still insist that the permanent waste disposal problem will be solved within a few years.¹⁴⁶

Even without a permanent waste disposal technology, the NRC continues to license new power plants.¹⁴⁷ The NRC says that it "would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely."¹⁴⁸

disposal research until 1967. The 1974 budget was \$61 million, and the 1977 budget was \$230 million. IRG REPORT, *supra* note 7, at 2-5.

141. *Assembly Comm.*: Staff Background Papers, *supra* note 1, at § 3. The candidate technologies are placement in mined repositories, in deep ocean sediments, in very deep drill holes, in mined cavities in a manner that leads to rock melting (hence sealing of the cavity), and ejection into space. IRG REPORT, *supra* note 7, at 35. The report says that, most optimistically, mined repositories could be available perhaps in 10 to 15 years. Relying on this report, President Carter announced that 11 sites of different geologic media were to be studied for permanent disposal, with one to be selected by 1985 and in operation by the mid-1990's. Radioactive Waste Management Program, 16 WEEKLY COMP. PRES. DOC. 296 (Feb. 16, 1980).

142. REASSESSMENT, *supra* note 124, at 69. The consequences of the failure to find a permanent disposal method cannot be ignored. For example, "If there is even a small risk that large quantities of radiotoxic waste might some day find their way into the human environment with consequences which threaten the future of civilization, most would question the right of contemporary society to create this hazard." ISSUES AND CHOICES, *supra* note 120, at 254-55.

143. The first site, a salt mine at Lyons, Kansas, was found to be like "Swiss cheese" because of the oil wells drilled into it. See *Assembly Comm.*: Staff Background Papers, *supra* note 1, § 3, at 13; T. Connolly, *Nuclear Technology*, in STANFORD UNIV. INST. FOR ENERGY STUDIES, THE CALIFORNIA NUCLEAR INITIATIVE 85-88 (1976).

The second site, at Carlsbad, New Mexico, was abandoned when President Carter announced his new waste disposal policy. Radioactive Waste Management Program, *supra* note 141, at 295.

144. See Radioactive Waste Management Program, *supra* note 141, at 296.

145. As of mid-1974, 81 million gallons of liquid and solidified waste were distributed among the following sites: Idaho Falls, Idaho (3%); the Savannah River plant, South Carolina (25%); and the Hanford Reservation, in Richland, Washington (72%). ISSUES AND CHOICES, *supra* note 120, at 250-51. From 1958 to 1974, 429,000 gallons leaked from the Richland facility; in 1973 alone, 115,000 gallons leaked from the reservation for 48 days without notice. There has been a 100 gallon leak at Savannah River. *Id.* at 250.

146. See, e.g., 10 ENV'T REP. (BNA) 1018 (1979); INSTITUTE FOR CONTEMPORARY STUDIES, OPTIONS FOR U.S. ENERGY POLICY 136 (1977).

147. 42 Fed. Reg. 34,391 (1977) (petition to refrain from licensing until permanent waste disposal technology exists denied).

148. *Id.* at 34,393.

The NRC also believes that "[r]easonable progress towards the development of permanent disposal facilities is presently being accomplished."¹⁴⁹ Its authority to continue licensing has been upheld by the courts,¹⁵⁰ despite the lack of any actual permanent repository and in spite of estimates that a full-scale waste disposal site will not be in operation until the mid-1990's at the earliest.¹⁵¹

3. 1976 Amendments to the Warren-Alquist Act

By 1976, critics were demanding curtailment of nuclear power until the risks of the emergency core-cooling system (ECCS), high-level waste, plutonium proliferation, and rising costs were eliminated or reduced to a known minimum level. Proposition 15, a California voter initiative that appeared on the June 1976 ballot, was one of the first statutory attempts to halt the use of nuclear power.¹⁵² It sought to prohibit the licensing of additional nuclear power plants and to require the derating of existing plants unless: (1) the effectiveness of safety systems, including the ECCS, was demonstrated to be adequate; (2) the radioactive wastes could be stored or disposed of with no reasonable chance of escape; and (3) the limits on liability for a reactor accident

149. *Id.* at 34,391.

150. In *Natural Resources Defense Council, Inc. v. United States Nuclear Regulatory Comm'n*, 582 F.2d 166 (2nd Cir. 1978), the court upheld the NRC's refusal to halt licensing until the waste disposal safety issue was resolved. The court observed, "[I]t is clear that from the very beginnings of commercial nuclear power the Congress was aware of the absence of a permanent waste disposal facility, but decided to proceed with power plant licensing." *Id.* at 170. See also *Illinois v. United States Nuclear Regulatory Comm'n*, 591 F.2d 12 (7th Cir. 1979).

In *Minnesota v. United States Nuclear Regulatory Comm'n*, 602 F.2d 412 (D.C. Cir. 1979), the court allowed the NRC to "consider the complex issue of nuclear waste disposal in a 'generic' proceeding such as rulemaking, and then apply its determination in subsequent adjudicatory proceedings." *Id.* at 416.

The NRC, as a rule, will continue to license reactors despite the unavailability of permanent disposal, 44 Fed. Reg. 45,363 (1979), and "the issues being considered in the rulemaking should not be addressed in individual licensing proceedings." 44 Fed. Reg. 61,372 (1979).

151. See note 141 *supra*.

152. Proposition 15, The Land Use and Nuclear Power Liability and Safeguards Act, would have added Title 7.8 to the California Government Code (commencing with § 67500). The statement of purpose in proposed § 67502 included the following: "The people (and the State of California) further find and declare that substantial questions have been raised concerning the effect of nuclear fission power plants on land use and land use planning, as well as on public health and safety. Such questions include, but are not limited to, (a) the reliability of the performance of such plants, with serious economic, security, health, and safety consequences; (b) the reliability of the emergency safety systems for such plants; . . . and (c) the creation by one generation of potentially catastrophic hazards for future generations" MARCH FONG EU, SECRETARY OF STATE, CALIFORNIA VOTERS PAMPHLET, June 8, 1976 Primary Election, at 61.

imposed by the federal government were removed.¹⁵³ If passed, Proposition 15 would have required all operating nuclear power plants in California to shut down. In addition, it would have thwarted plans for building thirty-one new, large nuclear power plants by 1994.¹⁵⁴ The state legislature responded to Proposition 15 by holding hearings to examine the problems of nuclear power and the impact of the initiative on the state.¹⁵⁵

Through these hearings, the legislature studied the risks of the nuclear industry and identified four problems that even those in the industry agreed needed to be solved.¹⁵⁶ These problems were classified into four generic categories: (1) radiologic safety, defined as "the potential for massive releases of radioactive materials both from the reactor and from spent fuel transportation"; (2) long-term disposal of nuclear wastes; (3) blockages and shortages in the nuclear fuel cycle; and (4) the economic viability of nuclear power.¹⁵⁷ The first two categories concern the radiation hazards associated with nuclear power, and the last two focus on the economics of nuclear power.

In considering ways to meet these concerns while assuring California an adequate energy supply, the legislature sought to find some sort of "reassessment mechanism" whereby California would use nuclear power only if it were somehow determined to be safe and economical.¹⁵⁸ Some considered Proposition 15, which would have phased out nuclear power in California unless the safety and waste disposal problems were solved, to be too drastic.¹⁵⁹ Those opposed to Proposition 15 as a reassessment mechanism noted that ten percent of California's electrical generating capacity would be lost if the initiative passed. This would have resulted in an increase in electricity rates,¹⁶⁰ the necessity of finding replacement energy sources,¹⁶¹ a potentially adverse effect on employment and economic growth,¹⁶² and a possibly even greater environmental degradation because of the increased burning of

153. The Price-Anderson Act, 42 U.S.C. § 2210(e) (1976), puts a ceiling of \$560 million on the liability of a reactor operator or manufacturer in case of an accident. For a discussion of the Act's constitutionality, see Note, *The Price-Anderson Act: A Constitutional Meltdown of Tort Liability*, 8 HASTINGS CONST. L.Q. 371 (1981).

154. *Assembly Comm.*: Staff Background Papers, *supra* note 1, at §§ 1-2.

155. See *Hearings on Prop. 15*, *supra* note 134. The *Assembly Comm.*: Staff Background Papers, *supra* note 1, were prepared to aid the legislators during these hearings. After the hearings, the committee staff summarized the *Hearings on Prop. 15* and Staff Background Papers in the REASSESSMENT, *supra* note 124.

156. REASSESSMENT, *supra* note 124, at 12.

157. *Id.* at 13.

158. *Id.* at 103.

159. *Id.* at 152.

160. *Id.* at 136.

161. *Id.* at 142.

162. *Id.* at 145.

fossil fuels.¹⁶³

Furthermore, there was the possibility that Proposition 15 was preempted by federal law, since it regulated the construction and operation of a nuclear power plant for radiologic hazards.¹⁶⁴ The constitutionality of a state requiring full accident liability when the federal government had removed such a limitation was also a question.¹⁶⁵ In addition, it was not certain that California had the constitutional power simply to shut down a private utility's power plant.¹⁶⁶ Finally, consumers would have been required to pay hundreds of millions of dollars in capital costs for idle plants.¹⁶⁷

The legislature did not dispute the *motivation* for the conditions in the initiative, but only the severe *consequences* that followed if conditions were not met. As alternatives to Proposition 15, it considered two other methods of making a reassessment: (1) action by the Energy Commission,¹⁶⁸ and (2) the passage of new legislation, similar in purpose but milder in effect than Proposition 15.¹⁶⁹ It was proposed that the Energy Commission be authorized to conduct a review of the safety systems and waste disposal methods on a case-by-case basis during the licensing procedure. The legislature bypassed this approach, however, after noting that "three of the five commissioners have expressed pronuclear positions in public."¹⁷⁰ It therefore pursued the second method.

Based on the hearings concerning Proposition 15, the Assembly Committee on Resources, Land Use and Energy introduced four pieces of legislation, Assembly Bills 2820 through 2823, "designed to achieve in part and to supplement the goals of the Initiative."¹⁷¹ The bills were designed to meet the safety and economic concerns voiced throughout the hearings, while avoiding some of the harsh effects of Proposition 15.¹⁷² Existing plants, as well as four plants already proposed, were unaffected. In an attempt to avoid preemption, it was remarked in the legislative history that "reactor safety per se is not addressed by the bills" and that "[w]aste disposal *safety* is not directly addressed by the bills, which ask only that a method be chosen and accepted by the federal government."¹⁷³ Assembly Bill 2823, which would have prohibited

163. *Id.* at 146.

164. *Id.* at 124.

165. *Id.* at 134.

166. *Id.* at 135.

167. *Id.* at 136.

168. *Id.* at 152.

169. *Id.* at 154.

170. *Id.*

171. *Id.*

172. *Id.* at 156.

173. *Id.* (emphasis in original). *But see* text accompanying note 206 *infra*.

the licensing of more reactors unless the federal liability limits were removed, was defeated in the Assembly.¹⁷⁴ The other bills designed to regulate the nuclear fuel cycle and the location of nuclear power plants were passed as amendments to the Warren-Alquist Act and are codified in the California Public Resources Code.¹⁷⁵ Section 25524.1(a) prohibits the construction of any new nuclear power plants that require reprocessing for operation unless there exists a federally approved reprocessing technology. Section 25524.1(b) further requires that the Energy Commission find that either reprocessing or storage facilities for spent fuel will be in operation by the time such reprocessing or storage is required. Section 25524.2 prohibits the certification of any new nuclear power plants unless there exists a federally approved waste disposal technology. Section 25524.3 prohibits the certification of new plants until the Energy Commission has studied the possibility of siting new plants underground. Governor Brown signed these amendments into law five days before the vote on the initiative.¹⁷⁶ Proposition 15 was defeated by a two-to-one margin.

174. REASSESSMENT, *supra* note 124, at 154.

175. CAL. PUB. RES. CODE §§ 25524.1-.3 (West 1977 & Supp. 1981). Section 25524.1(a) provides that "[n]o nuclear fission thermal powerplant requiring the reprocessing of fuel rods" can be certified by the Energy Commission unless "[t]he commission finds that the United States through its authorized agency has identified and approved, and there exists a technology for the construction and operation of nuclear fuel rod reprocessing plants."

Section 25524.1(b) requires the commission to find "that facilities with adequate capacity to reprocess nuclear fuel rods from a certified nuclear facility or to store such fuel if such storage is approved by an authorized agency of the United States are in actual operation or will be in operation at the time such nuclear facility requires such reprocessing or storage; provided, however, that such storage of fuel is an offsite location to the extent necessary to provide continuous onsite full core reserve storage capacity."

Section 25524.2 provides that the commission may not certify any nuclear power plant until "the Commission finds that there has been developed and that the United States through its authorized agency has approved and there exists a demonstrated technology or means for the disposal of high-level nuclear waste."

Section 25524.3 prohibits the certification of any new facility until "[t]he commission has undertaken and completed a study of the necessity for, and effectiveness and economic feasibility of, undergrounding and berm containment of nuclear reactors, and . . . has determined whether to require by rules and regulations that nuclear reactors be either undergrounded or berm contained."

Undergrounding is the building of the plant or reactor in deep rock, carved out by conventional mining techniques. Berm containment is placing a reactor in an excavated pit and then covering it with soil. See generally ENERGY FACILITY SITING DIVISION, CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEV. COMM'N, UNDERGROUND SITING OF NUCLEAR POWER PLANTS: A DISCUSSION OF RELEVANT ISSUES (1976).

176. Acts of June 3, 1976, ch. 194-96, 1976 Cal. Stat. 374 (codified as amended at CAL. PUB. RES. CODE § 25524.1 to .3 (West 1977 & Supp. 1981)).

III. *Pacific Legal Foundation* and the Preemption of California's Nuclear Power Laws

Whether or not states should be able to prohibit nuclear power for safety reasons has been hotly debated.¹⁷⁷ In *Pacific Legal Foundation v. State Energy Resources Conservation & Development Commission*,¹⁷⁸ the Ninth Circuit, through use of the ripeness doctrine, chose to avoid discussing these controversial issues. In deciding whether or not a statute was ripe for review, the court evaluated "both the fitness of the issues for judicial decisions and the hardship to the parties of withholding court consideration."¹⁷⁹ It explained that while a challenge to a statute or regulation is fit for judicial determination if it raises a purely legal issue, a challenge that raises an issue which would be better illuminated by the development of a factual record is not ripe for review.¹⁸⁰ Of the fourteen sections of the Warren-Alquist Act and the three 1976 amendments challenged by the utilities, the court held that only section 25503, the three-site requirement, and section 25524.2, the waste disposal provision, were ripe for judicial review. It reasoned that section 25503 was ripe for review because its operation was "in no way hypothetical or speculative" and because it was inevitable that the statute would operate against certain individuals (i.e., every utility wishing to submit a notice of intention) even though the disputed provision had not yet been applied.¹⁸¹ The court felt that it would work a substantial hardship on utilities to delay review of section 25524.2 until the question of its constitutionality arose in a particular certification proceeding, by which time the utility may have expended considerable resources in the proposed plant. Because section 25524.2 inevitably bans certification of any new nuclear power plant as long as there is no waste disposal technology, the court felt that it was appropriate to let the utilities know before they made plans for a new nuclear power plant whether or not this ban was constitutional.¹⁸²

In holding that section 25524.1(b), the requirement of functioning storage or reprocessing facilities before licensing of future nuclear power plants, was not ripe for review, the court observed that the Energy Commission never adopted its own proposed recommendation that section 25524.1(b) be interpreted as to require spent fuel storage capacity over the lifetime of the reactor. From this observation, the court reasoned that "we cannot know whether the Energy Commission will ever find a nuclear plant's storage capacity to be inadequate," and

177. See notes 64 & 119 *supra*.

178. 659 F.2d 903 (9th Cir. 1981).

179. *Id.* at 915 (quoting *Abbott Laboratories v. Gardner*, 387 U.S. 139, 149 (1967)).

180. *Id.* at 915.

181. *Id.* at 917.

182. *Id.* at 918.

held "that the challenge to section 25524.1(b) is not ripe for review."¹⁸³ An examination of section 25524.1(b) reveals the fallacy of this conclusion.

Section 25524.1(b) can be interpreted in several ways. One interpretation is to require that spent-fuel storage space be available over the lifetime of the reactor. As the court noted, this interpretation was suggested in the *NFCC Draft Report* but was never actually adopted by the Commission.¹⁸⁴ The phrase in section 25524.1(b)—"provided, however, that such storage of fuel is in an offsite location to the extent necessary to provide continuous onsite full core reserve capacity"—allows for another interpretation. This proviso could be interpreted as requiring that an operating reactor always have full core discharge capacity.¹⁸⁵ This would be an alternate way of insuring that there would always be sufficient space for the spent fuel produced by the reactor.

Hence, under any interpretation of section 25524.1(b), a plant's storage capacity will be found inadequate if the fuel cycle is clogged by having no place to store the spent fuel. Without either full core discharge capacity or spent-fuel storage capacity available over the lifetime of the reactor, a new plant may not be certified. Section 25524.1(b) thus bars certification of any new nuclear power plant in California in the absence of an unclogged fuel cycle as effectively as section 25524.2 bars certification of any new nuclear power plants in California in the absence of a permanent waste disposal method.¹⁸⁶ The operation of section 25524.1(b) is "in no way hypothetical or speculative." Just as the court found that it would work a substantial hardship on utilities to delay review of section 25524.2 until the question of its constitutionality arose in a particular certification proceeding, it should have found the same in considering the effect of not ruling on section 25524.1(b).

The court held that the rest of the statutes dealing with power plant siting were not ripe¹⁸⁷ because they had never been applied and

183. *Id.*

184. The NFCC DRAFT REPORT, *supra* note 130, at 113, recommended that the spent "fuel storage facilities should be designed to provide safe storage for all spent fuel accumulated during the reactor lifetime for up to fifty years after plant shutdown." The final report made no mention of this. *In re* Implementation of Nuclear Reprocessing and Waste Disposal Statutes, Final Report, Nos. 76-NL-1, 76-NL-3 (Cal. Energy Resources Conservation & Dev. Comm'n Sept. 13, 1978).

185. For a discussion of full-core discharge capacity, note 134 *supra*.

186. After holding §§ 25524.1 & 25524.3 not ripe, the court went on to consider § 25524.2. "Although sections 25524.1(a) and 25524.3 pose no present barrier to the development of nuclear power in California, we cannot say the same of section 25524.2." 659 F.2d at 918. Apparently, the court also felt it could not say the same of section 25524.1(b). Thus, why it refused to hold it ripe for review is puzzling, to say the least.

187. The court found the following sections of the California Public Resources Code not ripe for judicial review: § 25500 (conditions construction or modification of any power plant

the court refused to speculate either on how the statutes might be applied in the future¹⁸⁸ or on the purpose of the information sought and how it would be utilized by the Energy Commission. The court reasoned that the threat that the statutes might be unconstitutionally applied in the future did not make a substantial immediate impact on the utilities sufficient to present a ripe issue.

The court's own rationale in holding the waste disposal provision ripe for review, however, supports the opposite view—that the other certification requirements in the Warren-Alquist Act are also ripe for review. First, the issue is fit for judicial decision because it is purely legal—whether or not the Warren-Alquist Act has imposed unconstitutional substantive and procedural burdens on nuclear power development. The mere existence of these burdens, not the possibility of unconstitutional interpretation, creates the constitutional issue.

Second, to delay adjudication would work substantial hardship on the utilities. As the court reasoned in holding the waste disposal provision ripe for review, the utilities would be placed in a quandary by

on Energy Commission certification); § 25502 (establishes notice of intention requirement); § 25504 (describes content of the notice of intention); § 25511 (requires the Energy Commission to review safety and reliability of the proposed facility); § 25512 (requires the Energy Commission to make findings on the information submitted and to identify issues to be considered later); § 25514 (describes what the final report on the notice of intention shall contain); § 25516 (requires two alternate sites before notice of intention approval); § 25517 (requires certification before construction and restoration of site if certification is denied); § 25519 (establishes application for certification requirement); § 25520 (describes contents of application for certification); § 25523 (describes content of Energy Commission's Ruling on application for certification); § 25528 (authorizes the Energy Commission to control land use surrounding a facility); § 25532 (requires the Energy Commission to monitor the construction and operation of a certified facility). 659 F.2d at 916.

188. 659 F.2d at 916. The court's statement that the statutes have never been applied is misleading. PG&E did submit a notice of intention for the Stanislaus Nuclear Project on August 30, 1977 (Docket No. 77-NOI-3), which the court accurately notes was rejected for insufficient data. 659 F.2d at 916 n.2. PG&E had submitted information only as it felt §§ 25502 and 25504 required. "The inclusion by Applicant of information in this document other than that specified in section 25504 of the Public Resources Code is not acknowledgment of the relevance thereof in NOI proceedings." Docket No. 77-NOI-3 at I-1. The NOI was returned thirty days later because "the NOI did not contain information required by Commission regulations in sufficient detail to permit an adequate staff analysis." CALIFORNIA ENERGY COMM'N, STAFF REPORT ON DATA ADEQUACY, PACIFIC GAS & ELECTRIC CO. STANISLAUS NUCLEAR PROJECT 2 (Docket No. 77-NOI-3) (Nov. 1977). The report based its rejection on § 25511, which "expressly requires that detailed information be provided in the NOI on matters relating to safety and reliability." *Id.* at 3. Although the commission was ordered to accept the NOI (which PG&E never did resubmit), *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, No. 732-870 (Cal. Super. Ct., memorandum of intended decision May 22, 1978; stipulated judgment entered Aug. 15, 1978), this order did not change the interpretation given the statutes by the commission in its rejection of the NOI. The court must have overlooked these events when it said, "We have no way of knowing what types of information the Energy Commission might require of the utilities." 659 F.2d at 916.

being forced either to abandon their plans to use nuclear power (with the result that the challenges to the Warren-Alquist Act would never be ripe) or to make massive expenditures¹⁸⁹ for nuclear power with the hope that the burdensome siting procedures would be invalidated. By declaring these statutes not ripe, the court left them open to attack at each stage of the state regulatory process.¹⁹⁰ The litigation over the constitutionality of that process could discourage the utilities from proceeding with any plans for new nuclear power plants. Thus, the court should have considered all of the challenged provisions of the Warren-Alquist Act ripe for review.

A. Express Preemption

The court in *Pacific Legal Foundation* concluded that "Congress intended to preempt only state regulation of radiation hazards associated with nuclear power, and not state regulation for other purposes."¹⁹¹ States may therefore regulate nuclear power for economic, environmental, and nonradiological safety purposes. This holding is consistent with the statutory scheme created under the Atomic Energy Act of 1954, the 1959 amendments, the opinions of the United States Supreme Court and various lower courts, as well as with the position of the NRC.¹⁹² It is well settled that any statute that postpones or prevents the certification of a nuclear power plant because of a concern for radiation hazards should be preempted. If enacted for any other reason, such a statute should be upheld as a valid exercise of state power.

1. Section 25524.1

Section 25524.1(a),¹⁹³ California's reprocessing provision, was designed to insure that nuclear power would be able to meet rather than aggravate California's energy needs. The legislature was well aware both of the industry's reliance on reprocessing to dispose of the

189. According to its brief, PG&E spent at least \$10 million on the Stanislaus project as of August 30, 1977. Appellees' Brief at 15, *Pacific Legal Found.*, 659 F.2d 903 (9th Cir. 1981).

190. The issues which arose in the Stanislaus notice of intention, note 188 *supra*, inevitably will arise again should the utilities submit another notice. The court thus invites litigation by not passing upon the constitutionality of the notice requirements as applied in the Stanislaus proceedings.

191. 659 F.2d at 922.

192. See notes 52-80 and accompanying text *supra*.

193. See note 175 *supra*. Section 25524.1(a) is confusing since only breeder reactors technologically require reprocessing, and the statute seemingly is intended to apply to all types of reactors (otherwise it would have been unnecessary to exempt the already existing LWR reactors in California). The legislature therefore must have intended to address economic rather than technological requirements, that is, to have the section apply to plants which require reprocessing to close the fuel cycle or to prove a continuous supply of uranium fuel. See NFCC DRAFT REPORT, *supra* note 130, at 29.

spent fuel and of the upcoming crisis if reprocessing did not become a viable method of unclogging the nuclear fuel cycle and preventing the shutdown of reactors due to full spent-fuel pools. Indeed, when the nuclear bill was passed in 1976, reprocessing was considered the only method of preventing such a shutdown.¹⁹⁴ By denying certification to plants that use reprocessing to unclog the fuel cycle when the actual reprocessing method is technologically unavailable, California tried to avoid the same mistake that threatened, and continues to threaten, premature closure of many existing reactors. This is a valid economic rather than a prohibited safety motivation.¹⁹⁵ Section 25524.1(a) should therefore be held constitutional as within state regulatory powers.

Section 25524.1(b), the reprocessing and spent-fuel storage provision, is also economically motivated. While section 25524.1(a) sought to prevent undue reliance on reprocessing, section 25524.1(b) sought to insure that the fuel cycle would be unclogged *even without reliance on reprocessing*. The threat of premature closure, considered serious during the hearings on Proposition 13,¹⁹⁶ is even more acute today.¹⁹⁷ "Section 25524.1(b) attempts to secure assurances prior to plant certification that adequate capacity is expected to be available either through reprocessing or expanded storage to prevent shutdown of the reactor due to accumulating backlogs of spent fuel."¹⁹⁸ Since the effect of this section is simply to deny certification unless the fuel cycle is unclogged,

194. NFCC DRAFT REPORT, *supra* note 130, at 8. See also notes 127-34 and accompanying text *supra*.

195. In fact, there are no safety reasons for preferring either reprocessed or nonreprocessed fuel. Reprocessing neither increases nor decreases the radiation hazards of spent fuel. Although reprocessing changes the nature of the high-level wastes, it does not change the nature or magnitude of the disposal problem. Reprocessing reduces the volume occupied by the fission products but contaminates other materials with plutonium and other long-lived isotopes. Partitioning these long-lived species could reduce the long-term risks but would create new short-term risks. "The possible reduction in long-term risks is small, if it exists at all." ISSUES AND CHOICES, *supra* note 120, at 329.

196. See text accompanying notes 156-57 *supra*.

197. The nuclear plant at Rancho Seco, California, will run out of full-core discharge capacity (FCDC) in 1984 and will use up all of its storage space in 1987 unless more spent fuel storage space is found. Unit 1 at the San Onofre, California, plant ran out of FCDC in 1980 and will use up its storage space in 1983. San Onofre is shipping some of its waste to the G.E. Morris site in Illinois until its new unit comes on line. 126 CONG. REC. S10247 (daily ed. July 30, 1980). The Illinois legislature passed a law banning importation of spent fuel from another state unless the other state had standards similar to Illinois regarding spent fuel storage and had entered into a reciprocity agreement with Illinois. The Illinois Attorney General filed suit to prevent the shipments, commenting, "let them [Southern California Edison] take their waste that they want to haul here and move it right next door." Wall St. J., Dec. 29, 1980, at 4, col. 7. The law was held to be unconstitutional, however, as violative of the supremacy and commerce clauses. General Elec. Co. v. Fahner, No. 80 Civ. 6835 (N.D. Ill. Oct. 12, 1981).

198. NFCC DRAFT REPORT, *supra* note 130, at 101.

its economic justification cannot be disputed. Thus, not only should it have been held ripe for review, it should also have been held a constitutionally valid economic regulation of nuclear power.

2. Section 25524.2

In addition to finding section 25524.2,¹⁹⁹ the waste disposal provision, ripe for review, the court found that it was an economic provision designed to unclog the fuel cycle. The court relied heavily upon statements of purpose and intent in the *Reassessment* to reach this conclusion.²⁰⁰ It reasoned that because this provision did not specifically require a *safe* federally approved permanent disposal method, it was not a safety regulation. The court focused its analysis of intent on the words in the statute and in the legislative history. As an economic regulation of nuclear power, therefore, the court held that it was not expressly preempted.

An examination of the *operation* of the statute compels a contrary conclusion.²⁰¹ Because the court failed to review section 25524.1(b), it did not perceive the relationship between section 25524.1(b), section 25524.2, and the unclogging of the fuel cycle. Once full core discharge capacity, reprocessing, or spent-fuel storage space is required over the lifetime of the reactor, the fuel cycle is thereby unclogged. Requiring any other storage or disposal method is then economically unnecessary. Since section 25524.1(b) entirely provides for the unclogging of the fuel cycle, any other provision with the same purpose would be superfluous.²⁰² The waste disposal provision, therefore, is not needed for the alleged economic purpose of unclogging the fuel cycle. The reprocessing and spent-fuel storage provision by itself alleviates any economic problems of the nuclear fuel cycle. As long as section 25524.1(b) is in effect, section 25524.2 will have no impact upon the economics of the fuel cycle. Section 25524.2 thus has no valid economic foundation.²⁰³

199. See note 175 *supra*.

200. See note 173 and accompanying text *supra*.

201. So does an examination of several admissions in Energy Commission reports. See note 194 and accompanying text *supra* (reprocessing was considered the *only* method to unclog the fuel cycle when the amendments were passed); text accompanying note 207 *infra* (stressing that it is the ability to dispose of the wastes safely which needs confirmation).

202. If such other provision had the *sole* purpose of unclogging the fuel cycle, then it would be impossible to tell which one would be superfluous. However, if such other provision possibly had *dual* purposes, it is more likely that the legislature enacted two provisions to achieve two distinct goals rather than to enact two provisions to achieve only one goal. It should be presumed that the legislature enacted the two provisions with the intent that both would be effective.

203. It cannot be argued that permanent disposal is a more economical method of unclogging the fuel cycle. Permanent and temporary waste disposal costs are an insignificant fraction of the total cost of nuclear power, IRG REPORT, *supra* note 7, at 67; *Assembly Comm.*: Staff Background Papers, *supra* note 1, § 3, at 1.

Hence, the court's failure to examine section 25524.1 is more than just an isolated error. It affects the most important aspect of the decision—that the waste disposal provision was economically motivated and therefore constitutional. Had the court looked at the operation of and motivation for section 25524.1, it could not have held the waste disposal provision constitutional.

The only other possible motivation for section 25524.2 is radiological safety. Waste disposal has been considered a problem primarily because of the radioactive hazards posed by the wastes.²⁰⁴ The California legislature has never disputed this;²⁰⁵ in fact, one Energy Commission report states that "[it] is the ability to dispose of wastes *safely* which needs confirmation."²⁰⁶ This report also says that "[t]he ultimate purpose of a waste disposal technology is to confine and isolate wastes from the biosphere for long periods, hundreds or thousands of years."²⁰⁷ Proposition 15, partially motivated by radiological safety concerns,²⁰⁸ also contained a permanent waste disposal provision. Since section 25524.2 was enacted to take the place of the voter referendum, it was apparently motivated by a similar concern: radiological safety hazards posed by the lack of permanent and safe waste disposal technology.²⁰⁹

In sum, section 25524.2 lacks a valid economic justification and should have been held expressly preempted as a state regulation of nuclear power for the protection from radiation hazards.

3. Section 25524.3

Section 25524.3 requires a study by the Energy Commission on the effectiveness, necessity, and economic feasibility of underground siting before any new nuclear power plants can be certified. If the study finds undergrounding desirable, the Commission is authorized to require undergrounding. Because the Energy Commission's report found the added cost of undergrounding outweighed the added safety, and thus recommended that "underground siting should not be mandated,"²¹⁰

204. See notes 135-51 and accompanying text *supra*.

205. "The chances of premature waste release pose risks to the public for hundreds of years into the future." REASSESSMENT, *supra* note 124, at 67. "One must assure isolation of radioactive waste from the biosphere to such an extent that resultant health effects from potential human exposure are acceptably low." NFCC DRAFT REPORT, *supra* note 130, at 133.

206. NFCC DRAFT REPORT, *supra* note 130, at 133 (emphasis in original).

207. *Id.* at 127.

208. See note 152 *supra*.

209. This argument was raised in the Appellees' Brief at 16-21, *Pacific Legal Found.*, 659 F.2d 903 (9th Cir. 1981).

210. CALIFORNIA ENERGY COMMISSION, UNDERGROUND SITING OF NUCLEAR POWER REACTORS: AN OPTION FOR CALIFORNIA: A SUMMARY OF THE TECHNICAL AND ECONOMIC IMPLICATIONS WITH RECOMMENDATIONS, xi, 9-4 (Draft June 1978).

the court ruled section 25524.3 moot. Since section 25524.3 does not impose siting restrictions upon any plants that may be proposed in the future, and has imposed no such restrictions in the past, the court's ruling was correct. Nevertheless, if undergrounding had been required, this section would be preempted because the purpose of undergrounding is the protection of society from radiation hazards.²¹¹

4. *The Warren-Alquist Act*

Section 25503, the three-site requirement, was the only section of the Warren-Alquist Act that was held ripe for review. The court in *Pacific Legal Foundation* held that the provision was designed to "provid[e] California with an efficient means of deciding where a proposed power plant should be located. Such decisions have been regarded as within the states' authority, for nuclear as well as other power plants."²¹²

The same logic applies to the rest of the challenged provisions²¹³ of the Warren-Alquist Act. California enacted the Warren-Alquist Act to streamline and to simplify the power plant siting process.²¹⁴ Although the California legislature was interested in protecting the environment, there is nothing to suggest that the siting provisions were specifically designed to protect the public from radiation hazards.

The Warren-Alquist Act applies to *all* thermal power plants: federal licensees and nuclear plants are not subject to preferential or discriminatory treatment. The Supreme Court has said that although a state may not infringe on preempted ground, it would uphold "reasonable, nondiscriminatory conservation and environmental protection measures imposed' by a State."²¹⁵ The Warren-Alquist Act is this type

211. Faced with the inability to regulate safety systems directly in order to reduce the probabilities of an accident, which it felt were too high, the legislature looked at ways to soften the consequences should one of the reactor safety systems fail. *Assembly Comm.: Staff Background Papers, supra* note 1, at §§ 2, 41-45. For example, California looked at alternate design (nonLWR) technologies and alternate siting procedures (undergrounding, offshore, and berm containment). Some of the nonsafety reasons for undergrounding which were suggested in the legislature's hearings, such as aesthetics, proximity to load center siting, and better protection in case of war were discredited in the Energy Commission's report on undergrounding. See note 175 *supra*. Another study concluded, "It has become clear to us from our survey of the literature that the dominant motivation for undergrounding is to enhance the safety of the power plant [W]e have concluded that those who do not wish to accept WASH-1400 (the Rasmussen Report) as the definitive statement on the safety of nuclear power are on sound ground, and the examination of underground siting as it affects safety is a fruitful endeavor." R. MILES, JR. & M. GOLDSMITH, DECISION ANALYSIS FRAMEWORK FOR THE UNDERGROUND SITING OF NUCLEAR POWER PLANTS 1-1, 1-2 (1977).

212. 659 F.2d at 925.

213. See note 187 *supra*.

214. See notes 89-101 and accompanying text *supra*.

215. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 164 (1978) (quoting *Douglas v. Seacoast Prod., Inc.*, 431 U.S. 265, 277 (1977)).

of nondiscriminatory conservation and environmental protection measure and should have been upheld as a constitutional exercise of state power.

B. Implied Preemption

1. *Occupation of the Field*

Although the court in *Pacific Legal Foundation* recognized the doctrine of preemption by occupation of the field,²¹⁶ it applied only the express and conflict preemption tests to the California regulations. The court should have examined whether or not the Atomic Energy Act was evidence of occupation in the field for nonradiation hazards. It appears to have reasoned that since there is express preemption to regulate for radiation hazards in the Atomic Energy Act of 1954 and the 1959 amendments, there is no implied preemption by occupation of the field to regulate for nonradiation hazards. In light of the intentional ambiguity surrounding this preemption in the 1959 amendments and the desire to avoid explicitly stating the precise areas of preemption, such an implication was unwarranted.²¹⁷ The court's preemption analysis was thus incomplete. Upon examination of the issue, however, the practical result is the same.

The doubtful validity of implied preemption by occupation of the field is illustrated by applying the factors listed in *Rice v. Santa Fe Elevator Corp.*,²¹⁸ to the California regulations on nonradiation hazards (i.e., those regulations that have motivations other than to provide for protection from radiation hazards).²¹⁹ First, the pervasiveness of the federal regulations is not evidence of preemptive intent. Regulations of a complex and highly technical engineering system must, by circumstance, be elaborate and detailed. A pervasive scheme is required to insure that not a single person is harmed from a potentially deadly source.

As discussed earlier,²²⁰ a court rarely looks to the subject matter alone to determine if national uniformity is desired. A court prefers to look at congressional intent with respect to national uniformity. Nevertheless, the nonradiation aspects of nuclear power do not compel national uniformity. There is no inherent uniform preference for power produced by fission. States have different physical environments, climates, energy demands, and natural resources.

The Supreme Court has repeatedly held that it will not find preemption of state regulations for the sole reason that they coincide with

216. 659 F.2d at 919.

217. See note 70 and accompanying text *supra*.

218. 331 U.S. 218 (1947). See text accompanying notes 28-32 *supra*.

219. See notes 28-32 accompanying text *supra*.

220. See notes 45-46 and accompanying text *supra*.

the federal regulations.²²¹ Similarity of regulations, without more, will not bring about preemption. That the NRC requires certain information about nuclear reactors does not mean that the states cannot require the same information.²²²

Until 1971, the NRC's responsibilities were "confined to scrutiny of and protection against hazards from radiation."²²³ It was not until the National Environmental Policy Act of 1969 (NEPA)²²⁴ was interpreted to require all federal agencies to consider the environmental consequences of their actions "to the fullest extent possible" that the NRC considered matters other than radiation hazards.²²⁵ Therefore, because the NRC exercises NEPA jurisdiction over matters other than protection against radiation hazards, arguing that states are forbidden to regulate these nonradiological hazard areas concurrently is tantamount to arguing that NEPA preempted state jurisdiction over those areas. NEPA itself contains no such suggestion of preemption.²²⁶ Implied preemption by occupation of the field does not exist in the area of regulation of nuclear power for nonradiological hazards. The states are not preempted from regulating nuclear power in any areas not expressly prohibited.

2. Conflict Preemption

a. Actual Conflict

The court in *Pacific Legal Foundation* held that state regulations that actually conflict with federal regulations were preempted. Actual conflict occurs "if compliance with both federal and state regulations [is] impossible."²²⁷ Without analysis, the court concluded that "[c]ompliance with both federal and California laws is possible in the present case,"²²⁸ and thus no preemption resulted. The court did note, however, that there was a possibility that section 25524.2 might conflict with federal law should California ever prohibit a federally approved

221. See, e.g., *California v. Zook*, 336 U.S. 725, 730 (1949) (similarity in purpose and objectives of a state and federal statute does not mean automatic invalidity of state measures. "Coincidence is only one factor . . . guiding us to congressional intent"). See also *Colorado Anti-Discrimination Comm'n v. Continental Air Lines*, 372 U.S. 714 (1963).

222. *Power Auth. v. New York*, NUCLEAR REG. REP. (CCH) ¶ 20,105 (S.D.N.Y. 1979).

223. *New Hampshire v. United States Atomic Energy Comm'n*, 406 F.2d 170, 175 (1st Cir.), cert. denied, 395 U.S. 962 (1969). The court in that case noted that "[t]he history of the 1954 legislation reveals that the Congress, in thinking of the public's health and safety, had in mind only the special hazards of radioactivity." 406 F.2d at 174.

224. 42 U.S.C. §§ 4321-4369 (1976 & Supp. III 1979).

225. *Calvert Cliffs' Coordinating Comm. v. United States Atomic Energy Comm'n*, 449 F.2d 1109, 1129 (D.C. Cir. 1971).

226. *Id.*

227. 659 F.2d at 926.

228. *Id.*

method of waste disposal.²²⁹ Since this was only a possibility of conflict, and not a necessary conflict, the court correctly did not find preemption.²³⁰

The same result should have been reached with respect to the Warren-Alquist Act and section 25524.1, the reprocessing amendment. Neither the Warren-Alquist Act nor the reprocessing provision actually conflicts with federal law. The Warren-Alquist siting procedures are required to be followed in addition to the NRC licensing procedures.²³¹ There is nothing in the Warren-Alquist Act that prevents a utility from complying with any of the NRC regulations. Furthermore, there are no federal reprocessing requirements with which section 25524.1 can conflict.

Although there is no actual conflict, there is still the possibility that the Warren-Alquist Act, as amended, could conflict with federal law. The Energy Commission could use its broad siting authority to regulate for radiation hazards as was proposed in the hearings on Proposition 15.²³² Nevertheless, a court must avoid "seeking out conflicts between state and federal regulation where none clearly exists."²³³ When there is merely a possibility of conflict, a court may use purpose to reconcile the two schemes.²³⁴ In this case, the purpose of the federal scheme is safety related, while that of the state scheme is environmental and economic. This mere possibility of conflict, when there is a clear way to reconcile the two statutes, is thus insufficient to support preemption.

b. Obstacle Conflict

A state regulation is preempted, even when it is not in actual conflict with federal law, if it stands as an obstacle to the purposes and objectives of Congress.²³⁵ The court correctly observed that the Atomic Energy Act of 1954 did not intend to "promote nuclear power at all costs."²³⁶ After examining the 1954 Act and subsequent legislation

229. *Id.* at 925.

230. The court cited *Goldstein v. California*, 412 U.S. 546, 554 (1973), for the view that only necessary conflicts result in preemption. 659 F.2d at 925 n.35. See note 44 and accompanying text *supra*.

231. CAL. PUB. RES. CODE § 25500 (West 1977) prevents any provisions of the Warren-Alquist Act from imposing requirements that conflict with federal law: "The issuance of a certificate by the commission shall be in lieu of any permit, certificate, or similar document required by any state, local, or regional agency, or federal agency to the extent permitted by federal law, for such use of the site and related facilities, and shall supersede any applicable statute, ordinance, or regulation of any state, local, or regional agency, or federal agency to the extent permitted by federal law." *Id.* (emphasis added).

232. See text accompanying notes 168-70 *supra*.

233. *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440, 446 (1960).

234. See notes 38 & 41-44 and accompanying text *supra*.

235. See notes 22-26 and accompanying text *supra*.

236. 659 F.2d at 925.

touching upon energy and nuclear power, it held that "[i]nherent in the states' regulatory authority is the power to keep nuclear plants from being built, if the plants are inconsistent with the states' power needs, or environmental or other interests."²³⁷ Because the court had previously determined that sections 25503 and 25524.2 are environmental and economic regulations of nuclear power, the court held that they did not "impermissibly interfere with a federal goal of promoting nuclear power."²³⁸ The same result should have been reached with respect to the Warren-Alquist Act and the reprocessing provision. The Act is nondiscriminatory; it applies to nonnuclear as well as to nuclear generated electricity. In addition, the reprocessing amendment is designed to further the state's energy needs. These are simply economic and environmental provisions. Moreover, given that there is no federal policy to promote nuclear power at all costs, a federal license is a "permit to construct a power plant, not a Federal order to do so."²³⁹ A state policy that does not select nuclear power as the prime method of meeting its energy needs on the basis of economic and environmental considerations does not interfere with federal nuclear policy. The Warren-Alquist Act and the reprocessing amendment are therefore no obstacle to federal policy.

The court's conclusion that section 25524.2 is not preempted by federal policy, however, was made without consideration of an important factor: Section 25524.2 directly conflicts with NRC policy. That policy is to continue licensing despite the absence of a federally approved technology.²⁴⁰ Congress, too, is "aware of the absence of a permanent waste disposal facility, but [has] decided to proceed with power plant licensing."²⁴¹ Although California is apparently prohibiting nuclear power for a reason that the NRC has deemed insufficient to prohibit nuclear power, the court did not apply the conflict preemption test to this policy. This result was reached notwithstanding the court's own language. "State regulations which directly conflict with regulations of the NRC would, of course, be preempted even if they were enacted for purposes other than protection against radiation hazards."²⁴² If the

237. *Id.*

238. *Id.*

239. *Marshall v. Consumers Power Co.*, 65 Mich. App. 237, 259, 237 N.W.2d 266, 280 (1975).

240. See notes 147-51 and accompanying text *supra*.

241. *Natural Resources Defense Council, Inc. v. United States Nuclear Regulatory Comm'n*, 582 F.2d 166, 170 (2d Cir. 1978). See note 150 *supra*.

242. 659 F.2d at 922 n.29. The rest of footnote 29 states, "If the NRC required a nuclear plant to be constructed in a certain way for safety reasons, for example, a state could not require the plant to be constructed some other way for environmental reasons." But cf. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978) (states could impose additional nonsafety design regulations on ships that had complied with federal safety design regulations); *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440 (1960) (conflicting state regulations

court felt that state regulations that conflict with NRC policy are preempted, then it should have preempted section 25524.2.

PG&E also contended that the challenged statutes created the possibility of conflict between the Energy Commission and the NRC, which in turn creates a burden on the utilities and an obstacle to the federal objective of promoting nuclear power.²⁴³ The history of the scope of nuclear power regulation in California, however, evidences the remoteness of this possibility and hence the absence of grounds for preemption. The CPUC, which for years has had the same broad authority as the Energy Commission now has,²⁴⁴ has never used its power in an unconstitutional manner. Two out of four of California's existing nuclear power plants were threatened by the possibility of being regulated in an unconstitutional manner, yet neither actually was.²⁴⁵ The

enacted for nonpreempted purposes will not be preempted unless they exclude federally licensed activity). See notes 38-44 and accompanying text *supra*.

243. Appellees' Brief at 62-90, *Pacific Legal Found.*, 659 F.2d 903 (9th Cir. 1981).

244. See notes 89-93 and accompanying text *supra*.

245. When San Diego Gas & Electric and Southern California Edison sought a certificate of public convenience and necessity from the CPUC for the San Onofre Nuclear Generating Station, the California Public Utilities Commission (CPUC), "[a]fter carefully considering the entire record in this proceeding, and setting aside the matter of radiation hazards which are under AEC jurisdiction," granted the certificate conditioned on AEC approval of the safety systems. *Southern Cal. Edison Co. & San Diego Gas & Elec. Co.*, 62 Op. & Ord. Pub. Util. Comm'n of Cal. 651, 660 (1964).

When Pacific Gas & Electric sought certification for its Diablo Canyon nuclear power plant, the CPUC heard testimony on the emergency core-cooling system, the reactor containment structure, the costs of the plant, and the suitability of the site. The commission found that "[t]here is no evidence in the record concerning safety within our jurisdiction which would cause us to reject the proposed project as being unsafe." *Pacific Gas & Elec. Co.*, 62 Op. & Ord. Pub. Util. Comm'n of Cal. 639, 649 (1967). "Radiation hazards are subject to the exclusive jurisdiction of the [AEC]" *Id.* at 647 n.1. "[W]e recognize our responsibility to insure that the impact on the environment will be held to a minimum and that aesthetics will receive adequate consideration." *Id.* at 649.

The CPUC has consistently followed the California Supreme Court's decision in *North-ern Cal. Ass'n to Preserve Bodega Head & Harbor, Inc. v. Public Util. Comm'n*, 61 Cal. 2d 126, 200 P.2d 200, 37 Cal. Rptr. 432 (1964), that the states have jurisdiction over environmental matters, but not over radiation hazards. See *Consumers Arise Now v. Pacific Gas and Elec. Co.*, 72 Op. & Ord. Cal. Pub. Util. Comm'n of Cal. 261 (1971) (dismissal of allegations that planned nuclear power plants along the coastline would radioactively contaminate the environment); *People's Lobby v. Southern Cal. Edison Co.*, 73 Op. & Ord. Pub. Util. Comm'n of Cal. 652 (1972) (complaint alleging that San Onofre nuclear generating station was unsafe because of flaws in the ECCS dismissed because "[T]he Federal government has the exclusive authority . . . to regulate plant safety which involves radiation hazards." *Id.* at 659); *Order Denying Petition to Set Aside Submissions and Reopen Proceedings For the Taking of New Evidence With Respect to Decisions*, Nos. 73278 and 75471, Decision No. 92058, Op. & Ord. Pub. Util. Comm'n of Cal. (July 29, 1980) (denial of petition to reopen the proceedings which led to the granting of certificates of public convenience and necessity to PG&E for the Diablo Canyon Nuclear Power Plant). The CPUC believed that "if there are grounds for precluding or delaying operation of the Diablo units, those grounds would be based on concerns about radiological safety and health. . . . Issues pertaining to radio-

possibility of conflict between the CPUC and the NRC has never been an obstacle to the development of nuclear power in California, and the Energy Commission has no more authority than has the CPUC to invade federally preempted areas.

Furthermore, the Energy Commission has never overstepped its bounds. In the two notices of intention that the Commission has processed, one was approved,²⁴⁶ without the imposition of any regulations for radiation hazards, and the other was returned because, in view of section 25511, it contained insufficient detail.²⁴⁷ The Energy Commission thus has not trespassed into any preempted areas. There is no indication that it will in the future.²⁴⁸

The requirement in section 25511 to submit information to the Energy Commission involves no substantial burden on a utility. The NRC requires the same information.²⁴⁹ Since 1970, the CPUC, through General Order 131,²⁵⁰ has required the same information to be

logical safety are not within the jurisdiction or expertise of this Commission. The federal government has preempted authority over such issues delegating exclusive responsibility to the NRC." *Id.* at 2, 3.

246. California Energy Commission, In the Matter of: San Diego Gas & Electric Co., Notice of Intention to File Application for Certification of Site and Related Facilities: Decision (Docket No. 76-NOI-2) (Dec. 21, 1977). San Diego Gas & Electric never filed the application for certification for this plant (Sundesert) because the commission refused to exempt it from the waste disposal requirement of § 25524.2. Economics was also an important factor in the decision to terminate the project. CALIFORNIA ENERGY COMM'N, REPORT TO THE LEGISLATURE, AB 1852: ALTERNATIVES TO A SUNDESERT NUCLEAR PROJECT (Docket No. 77-NL-1). Thus, Sundesert was not terminated because of any abuse of the Warren-Alquist siting authority.

247. See note 188 *supra*.

248. During one of the trials in the federal district court, William R. Gould, President of Southern California Edison, was unable to pinpoint any of the California laws that he felt would be applied unconstitutionally. Instead, he testified that Southern Cal. Edison "would not go ahead with the notice of intention procedures with these laws on the book knowing fully well the political posture in this state (from its chief executive office, Governor Brown) on down through the regulatory commissions (including the CPUC) is definitely anti-nuclear." Reporter's Transcript at 178, *Pacific Legal Found.*, 472 F. Supp. 191 (S.D. Cal. 1979). Political disputes, however, are best resolved in branches of the government other than the judiciary. See, e.g., *Baker v. Carr*, 369 U.S. 186 (1962).

249. See Appellees' Brief at 77-90, *Pacific Legal Found.*, 659 F.2d 903 (9th Cir. 1981).

250. CPUC General Order No. 131, Rules Relating to the Planning and Construction of Electrical Generating and Transmission Facilities, 71 Op. & Ord. Pub. Util. Comm'n of Cal. 156 (1970), required the CPUC to consider the environmental impact of the proposed facility as well as the energy needs of the public. No certificate was to be issued unless the facilities are "necessary to promote the safety, health, comfort, and convenience of the public . . ." *Id.* at 157.

The General Order also required every certificate to include the following: why the plant was needed; "[s]afety and reliability information including planned provisions for emergency operations and shutdowns"; plant costs; capacity factors; fuel costs; design; construction and site information (geologic, seismic, water supply, population data, availability of alternate sites, and justification for the site adopted); descriptions of the facilities and control systems; and information on the environmental impact of the plant. *Id.*

provided by the utilities as section 25511 of the challenged law now requires. The utilities have not found General Order 131 to be a burden,²⁵¹ and they have not challenged the CPUC procedures in any litigation. If the process of obtaining state approval for a nuclear power plant were an obstacle to federal objectives, then state regulation of nuclear power for any reason would be preempted. The burden of bureaucratic compliance is insufficient to displace traditional state power.²⁵²

Conclusion

The court in *Pacific Legal Foundation* should have considered all the challenged statutes to be ripe for review. Whether or not they were preempted is a purely legal question at the present time and does not depend on how they may be applied in the future. By declining to hear the preemption question with respect to all the statutes on the merits, the court has contributed to uncertainty in the law.

The court was correct, however, in upholding the constitutionality of section 25503. Had the court addressed the constitutionality of the reprocessing provision and the rest of the Warren-Alquist Act, it should also have upheld these provisions for the same reasons. They are valid economic and environmental regulations, they conflict with no federal policy or regulations, and they pose no obstacles to congressional objectives.

The court was incorrect in upholding section 25524.2, the waste disposal provision. Since section 25524.1(b) alone insures that no new reactors will be certified as long as the fuel cycle is clogged, section

251. In granting Southern Cal. Edison and San Diego Gas & Electric the authority to construct two additional nuclear power units at San Onofre, the CPUC, pursuant to General Order, 131, note 250 *supra*, considered loss of coolant accident prevention, the emergency core-cooling system, waste management, emissions, spent-fuel handling and storage capabilities, environmental protection, and the economics of the proposed units. The CPUC concluded "There is no evidence *within our jurisdiction* which would cause us to reject proposed San Onofre Units 2 and 3 as being unsafe." 72 *Op. & Ord. Pub. Util. Comm'n of Cal.*, 53, 66 (1971).

Although it may be contended that "a State cannot constitutionally burden an applicant with furnishing information for the purpose of informing decisions that are forbidden to be made," Respondents' Brief 75-76, *Op. & Ord. Pub. Util. Comm'n of Cal.*, 659 F.2d 903 (9th Cir. 1981), one who submits information cannot know beforehand for what purpose it will be used. For example, information on the reliability of the safety systems may be used to determine the operational reliability of the plant as a whole, rather than to regulate for protection from radiation hazards. *See, e.g.*, Declaration of John Bryson (President of the CPUC) in support of Defendant's Memorandum in Opposition to Plaintiff's Motion for Summary Judgment, *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 489 F. Supp. 699 (E.D. Cal. 1980). Allowing the applicant to decide which information is necessary for the state to make its review removes the substance from the power of review.

252. *Power Auth. v. New York*, NUCLEAR REG. REP. (CCH) ¶ 20,105 (S.D.N.Y. 1979).

25524.2 has no reasonable economic rationale; rather, because it is intended to protect the public from the deadly radioactive wastes produced in the reactor, it can only be a radiological safety regulation. Congress has said that the federal government has the sole responsibility for regulating in that area. Section 25524.2 should have been ruled unconstitutional on the grounds of express preemption.²⁵³ Alternatively, it should have been ruled unconstitutional on the basis of conflict preemption since it is contrary to the NRC policy of licensing new plants despite the absence of a waste disposal technology.

In light of its state oriented view toward preemption, it appears that if presented with the question, the Court will uphold all of the Warren-Alquist Act and the reprocessing amendment (section 25524.1). Only the waste disposal provision meets the Court's narrow grounds for preemption. Indeed, *Pacific Legal Foundation* provides an excellent opportunity for the court to reaffirm its state oriented approach to finding preemption only when that is "the clear and manifest purpose of Congress."²⁵⁴

Those favoring limiting federal intrusion into areas of basic state concerns, such as local economics, health and safety, land use, and the environment, should welcome such a result. Traditional state functions should not be displaced without either a clear and express federal command or an actual conflict between the federal and state regulatory schemes. Absent a federal policy giving priority to nuclear power as an energy source, the states should be able to apply their traditional governmental authority to prevent local utilities from developing this particular type of power.

If another state wishes to follow California's lead and impose its own moratorium on the development of nuclear power, it would be wise not to rely too heavily on the California scheme as upheld by the Ninth Circuit in *Pacific Legal Foundation*. The Ninth Circuit did not completely analyze California's statutes, and another court may take note of the relationship between the reprocessing and spent-fuel storage provision and the waste disposal provision to find the latter unconstitutional. A state legislature wishing to condition the development of nuclear power on the existence of a permanent waste disposal method should avoid enacting a provision similar to California's Public Re-

253. As mentioned previously, *see* note 8 *supra*, the Supreme Court granted certiorari after this note already had gone to press. As urged by the United States Department of Justice, Brief for the United States as Amicus Curiae for Certiorari at 1, 20, the Court will only review the ripeness and constitutionality of §§ 25524.1(b) and 25524.2. Perhaps coincidentally, as part of its Brief, the Justice Department argued that § 25524.2 is economically unnecessary in view of § 25524.1(b) and thus is purely a safety provision, considering that it was enacted as an alternative to Proposition 15, whose undisputed motivation was protection from radiation hazards. Brief at 17, 18.

254. *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947).

sources Code section 25524.1. Absent a reprocessing or spent-fuel storage provision accompanying a permanent waste disposal requirement, it would be difficult to determine the real motivation underlying the waste disposal provision. Although the suggested scheme would not preclude a court from holding that the waste disposal provision was motivated by impermissible safety concerns, such a conclusion would be more difficult to reach.

Congress originally preempted state regulation of nuclear power for radiological hazards because it believed that the states were not technologically capable of protecting the public from those hazards.²⁵⁵ It also originally intended to give the states greater regulatory responsibilities as their technological capabilities developed.²⁵⁶ These intentions, however, merely supported the imposition of minimum federal safety standards. Congress has never intended to prevent the states from providing additional protection to its citizens. The Atomic Energy Act and its amendments now have this effect because Congress, through inaction, has allowed the states' technological ability to outstrip their legal power. This congressional inaction has caused standards intended to insure basic safety protection to subvert their very purpose. It is congressional negligence, both in drafting the original legislation²⁵⁷ and in failing to continue to coordinate that legislation with technology that frustrates state attempts to provide greater protection to their populations.

It is incongruous for Congress to allow states to prohibit nuclear power for economic and environmental reasons but not for safety reasons—for protection of property but not people. As a remedy, Congress should change the law so as to allow states to condition the use of nuclear power on safety as well as on economic factors.

255. See note 68 and accompanying text *supra*.

256. *Id.*

257. See note 70 *supra*.

